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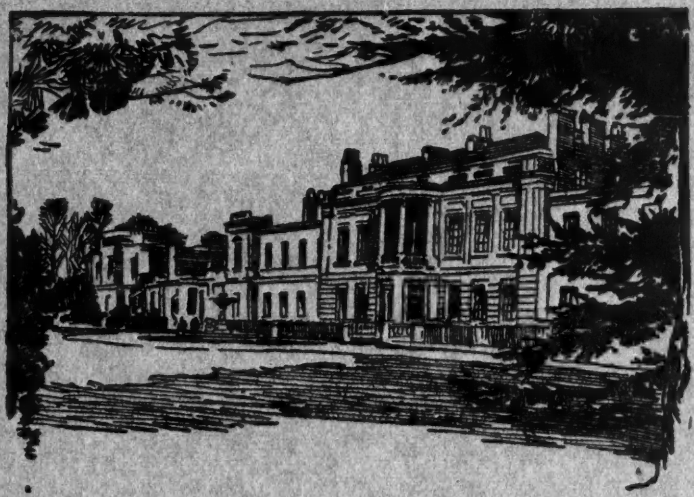

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The Bristol Medico-Chirurgical Journal

"Scire est nescire, nisi id me
Scire alius sciret."

SPRING, 1939.

MEDICINE AND THE DRAMA.

The Presidential Address, delivered on 12th October, 1938, at the opening of the Sixty-sixth Session of the Bristol Medico-Chirurgical Society.

BY

LEONARD A. MOORE, M.B., CH.B.,
Honorary Anæsthetist to the Bristol Royal Infirmary.

I HAVE chosen the subject "Medicine and the Drama," for two reasons: first, the drama seems to be a stepping-stone to the Presidency of this Society. As you know, the Medical Dramatic Club is the oldest surviving dramatic club in Bristol, and a large number of our presidents have passed through its ranks. Secondly, the drama is the one subject outside our professional interests that can claim a big majority of our members as its devotees.

Medicine in one or other of its varied aspects has been the theme of innumerable plays. Shakespeare alone has five hundred references, and many a play

has a clever character-sketch of a doctor either as hero, villain, or comedian. The authors treat us very much as they do the stage parson, exaggerating our peculiarities and minimizing our virtues.

The only play that mentions a contemporary doctor by name is Farquhar's *Twin Rivals* (1702).

> "Does the silly creature imagine that any man would come near her unless it were Dr. Chamberlen."

In preparing this address I have come across extracts from plays that have seemed very apropos of several of the papers we have had read to us lately. Take the latest, Mr. Willway's paper on the brain; in Macbeth we read:—

> *Macbeth:* ". . . The times have been,
> That, when the brains were out, the man would die,
> And there an end; But now they rise again."
>
> *Macbeth*, III. iv.

Dr. Ling's: "The Emotional factor in Disease":—

> "As the mind has a great influence over the body, and is very often the cause of sickness, my custom is first to cure the mind before I proceed to the body . . . her illness proceeds only from a disordered imagination, and a depraved desire to be married."
>
> Molière, "*Love is the Best Doctor.*"

> *King Henry:* "Then you perceive the body of our kingdom,
> How foul it is; what rank diseases grow,
> And with what danger, near the heart of it.
>
> *Warwick:* "It is but as a body, yet, distemper'd,
> Which to his former strength may be restor'd,
> With good advice and little medicine."
>
> *Henry IV* (2), III. i.

As both these extracts were written over three hundred years ago, it appears we have been rather tardy in starting a psycho-therapy department in Bristol.

You all remember Dr. Foss's recent paper on hormone activity which seemed to bring to us old 'uns a vision of renewed vigour and perpetual youth.

Sir Kenelm Digby had a remedy called " Viper Wine," a decoction much in vogue with the superannuated Lotharios of the seventeenth century, the predecessors of the " gay old dogs " of to-day who submit to monkey gland treatment or Steinach operations, or who will (I suppose) in future demand hormone injections.

> " Your Viper wine,
> So much in practice with grey headed gallants,
> But Vappa to the nectar of her lips."
>
> Messinger, *Believe As You List.*

Vappa was a pallid wine, an innocuous drink: the lady evidently was not so innocuous. The viper was chosen, I suppose, because it was so prolific; Aristotle noted that it brought forth twenty at one birth.

Syphilis attracts the dramatists, both ancient and modern: but with this difference, the old writers looked upon it as deforming the body, the modern writers as deforming the soul. To the modern writers it is a moral catastrophe, to Wycherly and the other seventeenth-century writers it was simply the French, Spanish or Neapolitan itch. To illustrate this difference in outlook let us compare the plots of Brieux's *Damaged Goods*, 1905, and Wycherly's *Country Wife*, 1675.

The plot of *Damaged Goods* is: A syphilitic young man, against doctor's orders, marries; his child is born with congenital lues, a wet nurse is infected, who, finding out the truth, tells the wife and wrecks the home. The play is good theatre and not merely a pamphlet or tract, in spite of its furious indictment against ignorance: ignorance that leaves the young at the mercy of their curiosity and the world in general at the mercy of the people who have the disease and do not realize its danger.

Of course, in quoting from old plays I must use the language of the times, which perhaps seems as coarse to us as it did to the Elizabethan Barber-Surgeon in Middleton's play, *Anything for a Quiet Life ;* who corrects the use of the word pox: "Oh fie! youth, Pox is no word of art: Morbus Gallicus or Morbus Neapolitanus had been well."

The Country Wife is a tale of a man who, pretending to have been rendered impotent by the inroads of the pox, gains the tolerance of London's jealous husbands, and gracefully seduces their wives. Wycherly's play was received with enthusiasm. Brieux's play had much the same reception as had Ibsen's *Ghosts.*

When in the late nineteenth century Ibsen began his single-handed crusade against social hypocrisy, the outcry in the London press was hysterical. One great newspaper, for instance, described it as a disgusting representation—as an open drain, a loathsome sore unbandaged. To-day *Ghosts* is recognized both as a stage classic and an effective moral sermon.

Here is the case history of Oswald Alving, the chief character in the play: Mother alive and apparently healthy, father died of syphilis. The young man suffered from headaches when a child. He became an artist and lived in Paris a typical bohemian life. It is made clear in the play that he was not exposed to syphilis. The onset of his illness was at the age of 25, severe headaches, pain in the back of his head, inability to work, loss of energy, and dizzy spells. Two years later he had an attack of short duration which left him "helpless as an infant." It disappeared without sequelae. He consults a Paris specialist who tells him the truth, which he won't believe, his mother having brought him up to idealize his dead father. Mental change and symptoms in Oswald's character are skilfully depicted by Ibsen. Oswald is emotionally unstable, rising from depths of depression to the heights of mania. He is tormented by the thought of becoming helpless and having to be fed with a spoon like a baby, and tries to persuade his mother that when this happens she will poison him with

morphia. In the last act Oswald has an attack on the stage and sinks in the chair paralysed and cries: "Give me the Sun, the Sun." If Ibsen meant this for aphasia and that Oswald was calling for the morphia, it is expecting rather a lot from a lay audience.

Now it is interesting that Drs. Esmarch and Jesson in 1857 wrote of the possible relationship between G.P.I. and syphilis, but it was not till 1877 that Dr. Clouston reported a case in a congenital syphilitic. And Oswald's symptoms were very much like the published case of Clouston. In the light of what is known of juvenile paresis Oswald's symptoms, written by a lay person in 1880, are a clever description of this disease.

The first appearance of the pox baffled the medical profession. The treatment at first was sweating and dieting: then from the use of mercury for the itch by the Arabs, mercury was used for syphilis, by fumigation and inunction, and thus the first specific was discovered.

A *double entendre* of the pocky valet Dufroy:—

"Haste, Dufroy, perform what I commanded you."
"I vill be very quick, I am more than half de Mercury."

Etherage, *Comical Revenge*.

Under properly regulated mercury treatment the patient spat four pints in twenty-four hours. One method was to place the patient in a tub and have cinnabar thrown on a hot dish in it. The mercury thus volatilized deposited on the surface of the body, and he was then sweated in the tub. (Figures 1, 2.)

The tub used was the one used for curing or corning beef; the beef was well powdered with salt in the process, and thus the tub was called

the powdering-tub. This explains Shakespeare's references to the tub:—

Pompey: "Troth, Sir, she hath eaten up all her beef, and she is herself in the tub."

Measure for Measure, III. ii.

Pistol: "To the spital go,
And from the powdering-tub of infamy
Fetch forth the lazar kite of Cressid's kind."

Henry V, II. i.

In the lines from Timon of Athens, you will find a really remarkable group of syphilitic symptoms written over three hundred years ago: tibial nodes, laryngeal symptoms, necrosis of nasal bones, alopecia and impotence. Authorities say this is the first published record of the depression of the nose caused by syphilis:—

Timon: ". . . Consumptions sow
In hollow bones of man; strike their sharp shins,
And mar men's spurring. Crack the lawyer's voice,
That he may never more false title plead,
Nor sound his quillets shrilly: hoar the flamen,
That scolds against the quality of flesh
And not believes himself: down with the nose,
Down with it flat; take the bridge quite away
Of him that, his particular to foresee,
Smells from the general weal: make curl'd-pate ruffians bald,
And let the unscarr'd braggarts of the war
Derive some pain from you: plague all,
That your activity may defeat and quell
The source of all erection."

Timon, IV. iii.

But I suppose this is no worse than Shakespeare trying to make a medico-legal point by throwing doubts upon Joan of Arc's moral character:—

Joan: "I am with child, ye bloody homicides:
Murder not then the fruit within my womb,
Although ye hale me to a violent death."

Henry VI (2), v. iv.

Showing the frequency of syphilis in those days we have the grave-digger's reply to Hamlet :—

Hamlet : "How long will a man lie i' the earth ere he rot ?"

Grave-digger : "Faith, if he be not rotten before he die,—as we have many pocky corses nowadays, that will scarce hold the laying in,—he will last you some eight year or nine year."

Hamlet, v. i.

And even ladies used the word pox as a kind of oath :—

Katherine : "A pox of that jest."

Love's Labour's Lost, v. ii.

A connection between gout and the pox was believed in by Doctor Sydenham, who says in his treatise on gout : "Gouty patients are generally rather old men or men who have so worn themselves out in youth as to have brought on premature old age, and of such dissolute habits, none being more common than the premature and excessive indulgence in venery and the like exhausting passions."

This confusion was shown in the seventeenth, century dramas. In fact, the poet Hedylus wrote 300 years B.C. :—

"The daughter of limb-loosening Bacchus and limb-loosening Venus is limb-loosening gout."

"As gout in age from pox in youth proceeds."

Wycherly, *Country Wife*.

"I know whence the pox is now descended : the gout begets it."

Broome, *Damoiselle*.

Falstaff : "A pox of this gout ! or, a gout of this pox ! for one or the other plays the rogue with my great toe."

Henry IV (2), i. iii.

I should like to give two or three examples of the endeavour of dramatists to keep up to date. In the

recent play, *The Amazing Dr. Clitterhouse*, we find a doctor who joins and leads a gang of criminals with the intention of studying the pathology of crime. He believes their experiences have a definite pathological effect on them, and proceeds to investigate on somewhat orthodox lines with blood-pressure examinations, laryngoscopy and blood analyses. The gang accepts with no more protest than "being mucked about every time we does a job; anybody might think we was 'orspital cases." Dr. Clitterhouse taught one of the gang to take blood before and after committing a crime, using a Behring-Venule.

This desire to be up to date is shewn by Shaw in *The Doctor's Dilemma*, written when Wright was working on vaccine therapy. He shews a character suffering from phthisis, hastened to the grave by being given a tuberculin injection when the blood was in the negative phase. The doctor did not believe in having the opsonic index investigated. The play is a splendid skit on our foibles, but loses much of its point by the animus shown by Shaw against our profession. For instance, in his introduction to the play he says: "Surgeons though often more unscrupulous than general practitioners yet retain their self respect more easily."

In the play *Men in White* we have the scene set in a very modern hospital. When a resident or honorary is wanted, loud-speakers in every ward and corridor shout out the name. I am sure our wives would welcome this at the B.R.I. But the most exciting episode is when the heroic young house surgeon dashes the hypodermic syringe from the hand of his chief who insists upon giving insulin to a patient suffering from hypoglycaemia, caused by too much insulin, and thus captures the sympathy of the audience in spite of

PLATE I

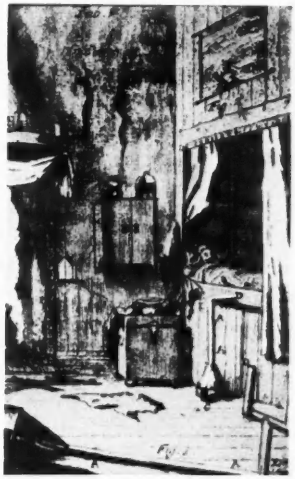

FIG. 1.
Mercurial Fumigation.

FIG. 2.
"The Tub."

Reproduced from "Eine Sterbende Krankheit," by Dr. Gerh. Venzmer (Montana-Verlag, A.-G., Leipzig.

PLATE II

FIG. 3.
Uroscopy.

MAL D'AMOUR. BY GERARD DOU.

FIG. 4.
Uroscopy. "*Mal d'Amour.*"

having seduced a young probationer: she later dies from septicæmia following an illegal operation performed by an abortionist.

Even in the seventeenth century we find reference soon made in plays to recent discoveries. Cinchona, known as "Jesuit's Powder," was brought to Europe in 1632, and used in England in 1655 by the Jesuits. It was a very highly gratifying experience for a physician of those days to watch the drug cure ague in hours, whereas under older non-specific treatment such as the application of a spider in a nutshell lapped in silk, or the application of chips from a hangman's tree, fevers took weeks to disappear; there were elements of drama in such a contrast. A dramatist in 1679 says:—

> "Marriage is to love as the Jesuit powder is to an ague; it stops the fit and in a little time wears it quite off."
>
> Shadwell, *True Widow.*

Dryden wrote, six years after Harvey's discovery of the circulation of the blood:—

> "The circling streams once thought but pools of blood;
> Whether life's fuel or the bodies food
> From dark oblivion Harvey's name shall save."
>
> Dryden's Introduction to *Choreogigantum* (*i.e.* Stonehenge). Walter Charleton. 1668.

In a play a year later, 1669, the keeper of an asylum explains how they whip the inmates out of a frenzy into stark madness and then whip them till they come round to their senses again. On this a character says:—

> "That plainly shews the circulation of the blood."
>
> Lacey, *The Dumb Lady.*

Of course many Bardolaters claim that Shakespeare had anticipated Harvey, quoting to suit their case such lines as these:—

Brutus: "You are my true and honourable wife,
As dear to me as are the ruddy drops
That visit my sad heart."

Julius Cæsar, II. i.

Menenius: "I send it through the rivers of your blood,
Even to the court, the heart."

Coriolanus, I. i.

But we might as well say that he anticipated the treatment of G.P.I. by malaria:—

Benvolio: "Take thou some new infection to thy eye
And the rank poison of the old will die."

Romeo, I. ii.

or anticipated Jazz:—

Richard: "The music mads me, let it sound no more. . . .
In me it seems it will make wise men mad."

Richard II, v. v.

or our new threepenny pieces:—

Hamlet: "Thou comes't in such a questionable shape."

Hamlet, I. v.

We can, however, take the credit given by the sensational press in the silly season of last year to a Dr. Clifford Allen, for a supposed original discovery that fat men were less neurotic and more dependable in emergencies than thin men, and give the credit to Shakespeare:—

Caesar: "Let me have men about me that are fat;
Sleek-headed men and such as sleep o' nights.
Yond Cassius has a lean and hungry look;
He thinks too much: Such men are dangerous."

Julius Cæsar, I. ii.

There is no doubt that if we allow our idolatry to get the better of our sense of proportion, we could say that Tennyson in *Maud* anticipated William Meyer's description of the adenoid facies: "A rabbit mouth that is ever agape."

Sir St. Clair Thomson thought that Shakespeare had described singers' nodules :—

> *Falstaff :* "For my voice, I have lost it with hollaing, and singing of anthems."
>
> *Henry IV* (2), I. ii.

but when he discovered that Sir John Falstaff had been exposed to syphilis and addicted to indulgence in wine, he thought it more likely tertiary syphilis in an alcoholic subject.

The historian Green says : "The earliest dramatists were for the most part poor and reckless in their poverty, wild livers, defiant of law and common fame, in revolt against the usages and religion of their day : atheists in general repute, 'holding Moses for a juggler,' haunting the brothel and the alehouse and dying starved or in tavern brawls." It is thought they obtained their knowledge of medicine in wandering systematically from the alehouse to the Hall of Barber Surgeons.

Whatever may have been their method, it is certain that the dramatists display an acquaintance with medicine so unusual and extensive that it must have been level with the highest knowledge of their time. As is shewn by their talk of pericranium, brain-pan, pia mater, cerebrum, cutis, spinal medulla and the colon : "The colon of the gentleman should be filled with answerable food."—Middleton, *The Chaste Maid of Cheapside.*

One form of quackery, the pretensions of which were seen through by the seventeenth-century dramatists, was water-casting, and some great artists have illustrated the procedure. (Figures 3, 4.) Uroscopy or water-casting is said to have arisen from the ecclesiastical interdicts placed upon the medical vocations of the clergy. Priests and monks not allowed to

visit their former patients are said to have resorted to diagnosing their cases and directing their treatment upon a simple inspection of the urine. Apparently the custom was not limited to the priesthood, for we find this line :—

> *Fabian:* "Carry his water to the wise woman."
>
> *Twelfth Night*, III. iv.

This indicated female quacks in the business. That some doctors were not beyond reproach in the matter is suggested by an old statute of the Royal College of Physicians, in which the members were forbidden to give advice upon the mere inspection of urine. The sixteenth-century dramatists made several references to this subject :—

> "Tell but some women a secret overnight, your doctor may find it in the urinal in the morning."
>
> Tourneur, *Revenger's Tragedy.*

Nowadays to detect pregnancy I believe the woman's urine is injected into immature rabbits. In the seventeenth century the procedure was simpler :

> "I was once sick and I took my water in a basket and carried it to a doctor."
> "In a basket ? "
> "Yes, sir, you arrant fool, there was a urinal in it."
> "I cry for mercy."
> "The doctor told me I was with child."
>
> Dekker and Webster, *Northward Ho.*

But as with the more elaborate tests of to-day the uroscopists some times failed. The doctor in another play diagnosed pregnancy by uroscopy, but at full time no baby had arrived.

> "What had she then ? "
> "Only a fit of the mother."
> "It's possible our doctor's urinal judgment is half cracked then."
>
> Jonson, *Magnetic Lady.*

"A fit of the mother" is a name for hysteria:—

> "Then for his person 'tis comparably odious, he hath such a breath, one kiss of him were enough to cure the fits of the mother. 'Tis worse than asafoetida."
>
> Otway, *Soldier of Fortune.*

Congreve also speaks of asafoetida as a cure for hysteria:—

> "Is there a worse disease than the conversation of fools?"
> "Yes, the vapours: fools are physic for it next to asafoetida."
>
> Congreve, *Way of the World.*

Uroscopy or water-casting is used in Macbeth to contribute a most effective metaphor:—

> *Macbeth:* "If thou could'st, doctor, cast
> The water of my land, find her disease,
> And purge it to a sound and pristine health,
> I would applaud thee to the very echo,
> That would applaud again."
>
> *Macbeth*, v. iii.

Speaking of medical metaphors, here is one that shows that Cæsarean section must have been well known to the audience of those days:—

> *Bastard:* "You bloody Neroes, ripping up the womb
> Of your dear mother England, blush for shame."
>
> *King John*, v. ii.

and of the infectious nature of disease:—

> *Falstaff:* "It is certain that either wise bearing or ignorant carriage is caught, as men take diseases, one of another; therefore let men take heed of their company."
>
> *Henry IV* (2), v. i.

Uroscopy began gradually to lose its hold in the seventeenth century:—

> "There is more credit to be given to the face, than to a sick man's urine, which some call the physician's whore, because she cozens him."
>
> Webster, *Duchess of Malfi.*

I don't think modern urine analysis will make the same appeal to twentieth-century dramatists.

URINE EXAMINATION.

Reaction .pH. . .	7
Specific Gravity	1018
Albumen	Nil
Blood	Nil
Sugar . .	Nil
Urea . .	1·3
Acetone Bodies	Nil
Bilirubin	Nil
Chorides	1%
Indican	Absent
Bence-Jones Protein	Absent
Diastase	20
Hormones	Negative
Deposit	Nil abnormal
Culture	Sterile

This looks impressive and we general practitioners look duly impressed when we read it: but when is added a diagnostic and prognostic conclusion, do we really pay enough attention to the fact that the person who has done it for us is not of necessity a doctor and at any rate has never seen the patient? Isn't it reminiscent of the conversation between Falstaff and his page:—

Falstaff: "Sirrah, you giant, what says the Doctor to my water?"

Page: "He said, Sir, the water itself was a good healthy water; but for the party that owed it, he might have more diseases than he knew for."

Henry IV (2), I. ii.

While on the subject of urine, have you ever heard of bagpipes causing enuresis?—

"What ails thy brother, cannot he hold his water at the reading of a ballad?"
"Oh no, a rhyme to him is worse than cheese or a bagpipe."

Jonson, *Every Man in his Humour.*

Shylock: "Some men there are like not a gaping pig,
Some that are mad if they behold a cat,
And others, when the bagpipe sings i' the nose,
Cannot contain their urine."

Merchant of Venice, III. v.

Weir Mitchell was interested in collecting examples of the psychasthenic symptom of fear of cats, observed and recorded by Shakespeare centuries ago.

One can only deal very briefly with the extraordinary insight Shakespeare had of psychology and of mental diseases. First the suggested treatment of madness, not adopted till our time.*

Leonato: "Fetter strong madness in a silken thread,
Charm ache with air, and agony with words."

Much Ado, v. i.

While the treatment of the time is recorded in *As You Like It*:—

Rosalind: "Love is merely a madness; and, I tell you, deserves as well a dark house and a whip as madmen do."

As You Like It, III. ii.

A modern neurologist has said that it is possible to detect epileptics by their faces alone:—

Kent: "A plague upon your epileptic visage."

King Lear, II. ii.

In spite of the extravagant, unintelligible and unpronouncable nomenclature of the mental specialists of to-day, have we advanced on Polonius's definition of insanity?

Polonius: "Your noble son is mad:
Mad call I it; for, to define true madness,
What is't but to be nothing else but mad?"

Hamlet III. ii.

By the way, I don't think Shakespeare, in spite of his psychological knowledge, would have been a disciple of Freud:—

Bottom: "I have had a dream, past the wit of man to say what dream it was: Man is but an ass, if he go about to expound this dream."

A Midsummer Night's Dream, IV. i.

* Leonato uses these words to illustrate *impossibilities*.—ED.

Here are two three-to-four-hundred-years-old extracts dealing with the bad psychological effect of repression, a term so beloved of our modern psychologists :—

"He oft finds medicine who his grief imparts,
But double griefs affect concealing hearts."

Spenser, *Faery Queen.*

"Those are the killing griefs which dare not speak."

Webster, *White Devil.*

Chlorosis, or green-sickness, a disease which was formerly common, but now seems to have disappeared, was used as a term of abuse :—

Capulet : "Out, you green-sickness carrion! Out, you baggage!
You tallow face!

Romeo, III. v.

It was also known that men could suffer from it :—

Falstaff : "Good faith, this same young sober-blooded boy doth not love me; nor a man cannot make him laugh; but that's no marvel, he drinks no wine. There's never any of these demure boys come to any proof; for thin drink doth so over-cool their blood, and making many fish-meals, that they fall into a kind of male green-sickness; and then, when they marry, they get wenches."

Henry IV (2), IV. iii.

We have no evidence, however, to support Shakespeare's idea that either alcohol or male green-sickness will influence the sex of the offspring. Perhaps Falstaff was only using the term as one of derision, equivalent to our present day term of "cissy."

The general opinion is that operations under general anæsthesia date from the discovery of chloroform and ether: "He is a clever operator is Walpole, but he's only one of your chloroform surgeons. In my early days you made your man drunk and the porters and students held him down and you had to set your

teeth and finish the job fast." (Shaw, *Doctor's Dilemma.*) But in 1632 we find these words :—

> "I'll imitate the pities of old surgeons
> To this lost limb, who ere they show their art,
> Cast one asleep, then cut the diseased part."
>
> Middleton, *Women Beware Women.*

Talking of drugs, the most commonly spoken of by the old dramatists was rhubarb: "I say that all these doctors 'ill do her no more good than a swig of water, your daughter wants summat else than rhubarb, a husband's a plaster that cures all lasses' complaints" (Molière, *Médecin malgrè lui*). I suppose aspirin is the one drug you would hear spoken of most in modern plays.

Shakespeare mentions aphrodisiacs :—

> *Falstaff:* "Let the sky . . . snow eringoes."
>
> *Merry Wives of Windsor,* v. iv.

The eringo root (sea holly) had some fame as an aphrodisiac perhaps because of its shape, and Dr. Bucknill reports that Dr. Hall, Shakespeare's son-in-law, prescribed it for his own wife. Dryden mentions camphor as an anaphrodisiac :—

> "But of this Jezebel of mine, I'll get a physician that shall prescribe her an ounce of camphor every morning for her breakfast to abate incontinency."
>
> Dryden, *Spanish Friar.*

I like best the references to the remedies our mothers still prescribe :—

> *Bottom:* "I shall desire you of more acquaintance, good master Cobweb: if I cut my finger, I shall make bold with you."
>
> *A Midsummer Night's Dream,* III. i.

> "Let me see your arm, Sir, I must have some powdered sugar to stop the blood."
>
> *Beau Stratagem.*

> "Fie, fie, what's all this. One of your eyes bloodshot? Use my ring to it, they say 'tis very sovereign."
>
> Webster, *Duchess of Malfi.*

Shakespeare sometimes uses the word medicine as meaning a doctor:—

> *Lafeu:* "I have seen a medicine
> That's able to breathe life into a stone,
> Quicken a rock, and make you dance canary
> With sprightly fire and motion."
>
> *All's Well That Ends Well,* II. i.

The medicine referred to is a lady doctor. And if we may judge the lady doctors of Shakespeare's time by our own charming colleagues, the whole thing is understandable.

An American writer, Charles Dana, says: "Medical satire and dispraise through the ages have been always much of the same kind and all the real solid and elemental jests against doctors were uttered over 2,000 years ago, and are being served up in the language of our times." Here is one that every generation serves up, taken from a seventeenth-century play:—

> "You make no more haste than a physician to a patient that has no money."
>
> Jonson, *Poetaster.*

Talking of fees, the recognized fee in Elizabethan times was an angel, about 10s. of our money. This led Culpeper to write:—

> "Physicians of the present day are like Balaam's ass, they will not speak until they see an angel."

Molière in the seventeenth century was witty and satirical in his plays at our expense, but his plays do not lend themselves well to brief quotation, and besides, they are well known. Marocreau de Brècourt wrote a farce soon after Molière's death showing Molière in

Hades defending himself against four doctors who had also arrived there. These are his words :—

> "It is not against medicine that I have so inveighed. I have adored the healing art, I revere its judicious practices, but I abhor and detest the pernicious and wicked use made of it by senseless fools whom only a diploma makes doctors. You perpetually prove your ignorance and uncertainty by constant disagreements. Never in your simplest prescriptions has the world ever seen you follow each other's prescriptions without adding or subtracting something. As to your opinions they are more varied than your practice. . . . You take every advantage of mankind's weakness and superstition, and in this dangerous moment you brazenly experiment with our lives with any remedy that may suggest itself to your ambitious imagination. You try anything in this confidence, that the sun shines on your successes and the earth hides all your failures.
>
> De Brècourt, *The Ghost of Molière.*

Did not Lloyd George, perhaps not a dramatist but rather a dramatic personage, echo Molière's words three hundred years afterwards, when he said of doctors ? "I found them unruly. The doctors are always changing their opinion. They always find some new fad."

I should like to ask if you agree with Sir Robert Hutchison, who says that from the middle of the nineteenth century down to the present time the progress of medicine has been so remarkable and its benefits to the community so conspicuous that the old jibes at doctors have lost their point, and are only repeated in jest.

I think the Americanism "sez you" would be the answer of most of us. At any rate the dramatists give us credit of having the decency not to talk about our patients :—

> *Surgeon :* "When we cure gentlemen of foul diseases, they give as much for the cure and twice as much that we do not blab on't."
>
> Webster, *Devil's Law Case.*

"You must be secret as your midwife or a barber surgeon."
Dekker, *Honest Whore.*

"I'll bring half the chirurgeons in town to swear it."
"They, they'll swear a man, bled to death through his wounds, died of apoplexy."
Wycherly, *Country Wife.*

V. B. Green Armitage has written a lengthy paper dealing only with his own speciality and Shakespeare. Here is his reference to longing of pregnancy:—

Pompey: "Sir, she came in, great with child, and longing, —saving your honour's reverence,—for stewed prunes."
Measure for Measure, II. i.

I should have liked to say something of the old Mummers' plays, all of which contain amusing medical dialogue, but I do hope my ineptitude will not put you off the subject.

May I end with three quotations from England's greatest dramatist, which, though written over 300 years ago, seem to me to be as applicable to our profession now as then?

Cleopatra: "Though it be honest, it is never good
To bring bad news."
Antony and Cleopatra, II. v.

Rosalind: "Your task shall be,
With all the fierce endeavour of your wit
To enforce the pained impotent to smile."
Love's Labour's Lost, v. ii.

Claudio: "The miserable have no other medicine
But only hope."
Measure for Measure, III. i.

LADIES AND GENTLEMEN,*

I was greatly flattered when asked to read to the Galenicals the Presidential Address I had given to the Medico-Chirurgical Society. The first thing I did was

* This portion was added as an introduction to an address to "The Galenicals."

to consult a dictionary to find out what the word Galenicals meant. I found that it was a term used to denote Standard Preparations, and I found that "standard" meant a degree of excellence. So you can imagine how honoured I was, and yet how diffident I feel when addressing a society composed of members having reached a degree of excellence.

I had thought it meant you were disciples of Galen: that huge, overshadowing figure, which eclipsed every other luminary in the playwright's mind, even that of Hippocrates himself. His name sanctioned any medical custom and sanctified every medical act:—

> "Arise, arise, your breakfast stays,
> Good water gruel warm
> Or sugar sops which Galen says
> With maice will do no harm."
>
> *Davenant.*

> "For I observe, so soon as his searching eyes had fastened upon her, his labouring pulse, that, through his fever, did before stick hard and frequent, now exceeds in both these differences; and this Galen himself found true upon a woman that had doted upon a dancer."
>
> John Shirley, 1628, *The Witty Fair One.*

Psychiatrists can claim Galen as one of the first luminaries of their art. The case, to which the pretended doctor in this play refers, illustrates the ingenuity and penetration of a first class physician. Galen, as he tells in his book on prognosis, had been called in to see a woman who was stated to be sleepless at night. These are his words:—

> "After I had diagnosed that there was no bodily trouble, and that the woman was suffering from some mental uneasiness, it happened, that at the very time I was examining her this was confirmed. Somebody came from the theatre and said he had seen Pylades dancing. Then both her expression and the

colour of her face changed. Seeing this, I applied my hand to her wrist, and noticed that her pulse had suddenly become extremely irregular. So on the next day I said to one of my followers that when I paid my visit he was to announce another dancer. When he did this I found the pulse was unaffected. He again did it with another name, and again the pulse was unaffected. On the fourth night, Pylades was again announced, and again the pulse was affected. Then I found out that the woman was in love with Pylades."

Before reading my paper I should like to give a few extra references from plays that I thought would be of interest to the students.

Ladies first: Cosmetics:—

"Shall we protest to the ladies that this painting makes them angels? No, Sir. Such vices as stand not accountable to law should be cured as men cure tetters, by casting ink upon them."

Marston, *Malcontents*, 1604.

"There's knavery in daubing."

Dekker, *Honest Whore*.

Hamlet: "I have heard of your paintings, too, well enough; God hath given you one face, and you make yourselves another."

Hamlet, III. i.

"Thou most ill-shrouded rottenness, thou piece made by a painter and apothecary."

Beaumont and Fletcher, *Philaster*, II. iv.

And now Gentlemen. I have been impressed by your lack of descriptive power in taking notes: you have Shakespeare's authority for its usefulness.

Doctor: "I will set down what comes from her to satisfy my remembrance of her."

Macbeth, V. i.

Your imagination does not seem to go beyond a "bag of worms." Now listen to Shakespeare's description of a mole:—

Iachimo: "On her left breast
A mole, cinque-spotted, like the crimson drops
I' the bottom of a cowslip."

Cymbeline, II. ii.

I am sure your teachers would appreciate your notes if written like this.

Ladies and Gentlemen: Love:—

"Oh ye Gods, have ye ordained for every malady a medicine, for every sore a slave, for every pain a plaster, leaving only love remediless."

Lyly, *Euphues.*

In another play of the same period, a physician says:—

". . . You are in love."
"I think I am. What's your appliance now?
Can all your Paracelsian mixtures cure it."

Middleton and Rowley, *Fair Quarell.*

Don't be despondent, it is not hopeless. Dryden says:—

"And love may be expelled by other love,
As poisons are by poisons."

Dryden, *All for Love.*

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THE MANAGEMENT OF SOME OBSTETRIC EMERGENCIES.*

BY

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IN recent years increasing stress has been laid by speakers and writers on the importance of ante-natal care in the preventive aspect of obstetrics, and it has come to be believed that by such means the great majority of obstetric emergencies can be avoided. That this is not fact has been the cause of many discussions on such subjects as "Why are we dissatisfied with the results of ante-natal observation," when the fault is not with the results of ante-natal observation but with those who built extravagant hopes and anticipations on such care. In the first flush of the recent outcry about maternal mortality the custom was to blame the general practitioner for every fault in our obstetric services: but later, when the nation-wide institution of ante-natal clinics had failed materially to reduce that mortality, it became the fashion to blame the amount or the kind of supervision received. It is not my intention to discuss the scope

* A paper read before the Bristol Medico-Chirurgical Society, 11th January, 1939.

of ante-natal supervision with its manifest advantages and definite limitations, except to emphasize this point; that no matter how complete such ante-natal supervision may be, emergencies, unexpected and often of a grave nature, are bound to occur from time to time in obstetric practice, and that the obstetrician must be properly armed with knowledge and with equipment to deal with such emergencies. It is this emergency aspect of obstetrics that I wish to discuss with you this evening. A preliminary point, not usually emphasized, is that the degree of emergency which a particular case presents depends not only on the clinical condition of the case, but almost equally on the general conditions and surroundings of the patient.

If we take three kinds of such conditions it will illustrate what I mean. Thus a case of ante-partum hæmorrhage occurring in a well-equipped hospital may cause little upset: it can be kept under observation and any necessary intervention can be carried out at the appropriate time and under proper conditions. But a similar complication occurring in a house in a town is much more upsetting. Removal to hospital or nursing home is indicated, and this, together with the family upset, represents a formidable effort and consumption of time. Again, in a cottage isolated in the country, the matter may be very grave. There is the distance, often long, to be traversed, the unsuitable domestic conditions for doing anything, and the difficulty and danger of transport, so that it may be for the best not to remove the patient, and the practitioner is faced with the full responsibility of a major obstetrical crisis. The importance, then, of

the attendant conditions is great and cannot be over-emphasized, and it may be necessary again to refer to this aspect of the matter.

The possible obstetrical emergencies are very numerous, and I shall confine myself to those most commonly encountered and shall endeavour to discuss the means we find most useful in dealing with them according to the surrounding conditions. The hæmorrhages represent some of the most important and urgent of these emergencies and call for special discussion.

HÆMORRHAGE.

Ante-partum hæmorrhage is mostly due to placenta prævia, and no condition may be more dramatic or call for more calm judgement. The first thing to be remembered is that shock is as great a danger in this condition as is the actual loss of blood, and in many cases the degree of shock present may be profound and bear no ratio to the amount of blood lost. The indication, therefore, is to manipulate the patient as little as possible, and with the greatest gentleness: and it is found in practice that in the vast majority of cases minor measures suffice to control the condition. In the first place, is it necessary to do anything active at all? If the bleeding is not severe, and if the contractions are good, pressure on the separated placenta by the presenting part is likely to solve the difficulty, and merely with observation the labour may be completed, possibly with the aid of low forceps. If this is not effective, it is not sufficiently recognized how great benefit may be obtained merely by rupturing the membranes: this is a simple manipulation which allows the head to be directly pressed on the bleeding

placental site, so that, in the great majority of cases, the hæmorrhage is controlled. If this is still unsatisfactory, Willett's forceps can be applied to the fœtal scalp if the cervix admits two fingers. If the head is steadied this can usually be done without anæsthesia, and if a good grip of the scalp be obtained, traction by a one-pound weight is just sufficient to keep up pressure and to control the bleeding.

Only if these measures fail need version be performed, and this requires the one and only anæsthetic to be employed. With a leg brought down in this way, in a marginal case the bleeding will be absolutely controlled and delivery should soon occur. Vaginal packing may be required in some cases, but in general practice should always be avoided. It must be remembered that vaginal packing, to be effective, is a major obstetrical operation : anæsthesia and antisepsis are necessary, also very many yards of sterile gauze if the fornices are to be properly packed, and such conditions are only to be obtained properly in hospital. Usually an insufficient amount of material is packed into the vagina, the main result of which is to predispose to sepsis. If the patient has to be sent to hospital the best thing is to give morphia gr. $\frac{1}{4}$ and to do nothing else, not even to examine.

Post-partum Hæmorrhage is another ever-present danger, and may be most grave. It is usually supposed to follow prolonged and exhausting labour, inertia, or twin pregnancy : but in many cases it follows a perfectly normal labour, and in other cases, when it might be expected, it fails to appear. As the condition is mostly atonic the first and main thing is to control the fundus, and this may sometimes be difficult.

Thus if the uterus has rapidly distended, its limits may be very vague, and a grab at the abdomen say in the region of the umbilicus may result in grasping the body of the uterus below the fundus, and so is useless. To make sure of grasping the fundus the hand should be sunk deeply into the slack abdomen just below the ensiform and carried down towards the umbilicus: only in this way can the fundus be with certainty identified and controlled, and often a gush of retained blood will indicate that this has been accomplished. Once this has been done, and an injection of ergometrine or pituitary extract given, the next indication is to keep the patient absolutely quiet and at rest. It will follow, therefore, that such cases should never be transferred to hospital. The responsibility has to be faced on the spot and with such simple measures the vast majority of cases will be successfully controlled: in only a very few will such measures as bimanual compression be necessary.

OCCIPITO-POSTERIOR PRESENTATION.

The occipito-posterior position of the vertex represents a complication and an emergency that is painfully familiar to many of us, and it has well earned the name of the bugbear of obstetrics. Much has been written regarding the causation of this condition and much conflicting advice has been given regarding its treatment. It is of the latter that I wish to speak, and I would like to emphasize the following points:—

(1) So long as progress in labour is being made interference is contra-indicated. With a not too large head spontaneous birth may occur with the occiput posterior, and this does not always cause undue

damage to the soft parts, and is preferable to the most expert interference.

(2) When progress has ceased the head has to be turned to make the occiput anterior, and this can always be done manually. Rotation by forceps is quite unnecessary and may cause much laceration of the vagina and the fœtal face.

In rotating a posterior occiput one of the most important factors is not only anæsthesia, but deep surgical anæsthesia: with this the parts are relaxed and rotation is easy, but if the patient merely has a "whiff" muscular resistance may make rotation impossible. Next, the whole hand should be introduced up the vagina and the position confirmed by feeling the ear: the head should then be disregarded and the hand carried upwards until the index finger is behind the anterior shoulder. If necessary the head should be lifted up out of the pelvis for this to be accomplished. Then with a rotating movement the shoulder is carried a full half circle across the anterior segment of the pelvis, and the head, which automatically follows, then becomes occipito-anterior and will remain so.

A trial of this manœuvre, which was described by Lamond Lackie several years ago, will demonstrate its great ease *provided that anæsthesia be sufficiently deep.* It is surprising that it has not been universally adopted to the exclusion of the difficult and uncertain bimanual method, in which, so often, only the head is rotated and slips back whenever the hand is removed.

(3) When the head has been successfully rotated, forceps extraction is usually indicated, as the patient has mostly had a long labour. But in some cases fresh

moulding in the anterior position may be necessary before this can be safely accomplished. Therefore, if extraction is not easy, if there is that sense of stuck resistance, the forceps should be removed and the head allowed more time for moulding. It has been my personal experience that the observance of these points has robbed this complication of most of its terrors.

LACERATION.

It may seem strange that I discuss so common an event as a *ruptured perineum* with you, but there are several points in the treatment of this common emergency that are of importance. The more thoroughly such a laceration is repaired at the time of occurrence the greater comfort will the patient have, and the less will be the probability of future prolapse. The first thing is clearly to define the limits and the depth of the laceration, and this is difficult when the parts are obscured by blood descending from the uterus. If a handful of swabs squeezed out of lotion be pressed up to the top of the vagina this will form a pad and so the field will be left clear and the limits of the laceration may then be seen. The operation of repair can then only be properly performed if there is a good strong direct light on the part, and this is easily secured by a large electric torch which should form an essential part of every practitioner's outfit. With such a light the deep and superficial suturing can be carried out with exactness and to whatever depth or extent necessary. These small points make all the difference between a perineal body properly repaired and the blind insertion of sutures here and there in a blood-soaked field in the dark.

SHOCK.

Obstetric shock is an alarming condition when it occurs, and it usually does so unexpectedly. In antepartum hæmorrhage, as mentioned, and after prolonged labour, especially with much manipulation, a varying amount of shock may be present. But the condition I have in mind is one in which the labour has been normal in course and duration, but after which, for no obvious clinical reason, the patient collapses with profound pallor and faint, rapid pulse. Thus in one case in my experience the patient collapsed immediately after the birth of the child, and was so ill that it was only two days later that the placenta could be removed. The cause of this condition is not at all clear, but in some cases it is supposed to be due to partial rupture of the uterus, while in other it is held to be an anaphylactic phenomenon due to the administration of pituitary. The best line of treatment in such cases is certainly sedative. Everyone except the attendants should be excluded, the room should be darkened, and morphia gr. $\frac{1}{4}$ should be given. With such treatment, aided if possible by a rectal saline, recovery is usually complete and in some cases surprisingly rapid. Cardiac stimulants, pituitary or adrenaline are best avoided as they may overstimulate an exhausted sympathetic nervous system.

ILEUS.

Paralytic ileus is a rare complication after labour, and usually follows a difficult instrumental confinement. The condition is alarming. Within an hour the abdomen may be greatly distended and tympanitic and the patient so gravely ill that urgent attention is

necessary. The best thing here is to give repeated molasses enemata with pituitary, and it will be found that in most cases flatus and later fæcal matter will be passed and the abdominal distension will subside.

SEPSIS.

Puerperal sepsis is not usually of rapid onset, and its treatment is usually provided for by local health authorities: but in some cases the onset and course are very rapid and the case has to be treated at home under emergency conditions. These cases fall into two main groups: in the majority of cases there has been previous manipulation during labour, and in such cases the infecting organism may be the hæmolytic streptococcus, the *bacillus coli*, or the staphylococcus: in the minority of cases sepsis develops after a perfectly normal untouched delivery or even when the baby has been born before the arrival of the attendant. The infecting organism is usually the hæmolytic streptococcus carried from the throat of an attendant, and the condition is usually very serious, indicating an inherent lack of resistance in the patient. The prognostic points, such as time of onset, degree of anæmia, amount of pyrexia, rapidity of pulse, and so on, are well known: but in many cases these points are indeterminate and in no class of case is it more difficult to give a prognosis for the individual patient. In my own experience I find the following of most prognostic significance:—

(1) The time of onset: in general the earlier the onset the worse is the outlook.

(2) The degree of anæmia: the more marked is this the worse the outlook.

(3) The condition of the tongue: a dry, foul tongue usually indicates a fatal conclusion, and a moist red one a good outlook.

(4) The condition of the epigastrium: if there is tender rigidity here, generalized peritonitis is present and the outlook all but hopeless.

As regards treatment certain general points have to be remembered. Thus the shoulders should be elevated to allow of free pelvic drainage. If the patient lies flat, foul lochia may accumulate in the posterior fornix and the condition be aggravated. Again, the uterus should be left alone as far as possible: any unnecessary manipulation, such as forceful bimanual examination or curettage, is likely still further to disseminate septic material into the circulation. If it is suspected that a piece of placenta has been retained *gentle* exploration with the gloved finger may be carried out, but nothing more than this should be done. For the same reason intra-uterine douching is contra-indicated, as it tends to make the septic process extend upwards. An occasional gentle vaginal lavage may be given merely to wash away discharge and so to improve the patient's general comfort. The general strength should be conserved by appropriate easily-digested food, and by stimulants, and everything possible should be done to increase the general comfort.

Many drugs have been advocated and used in the treatment of puerperal sepsis, but they have been largely superseded in recent years by Prontosil and its various sulphonamide derivatives. The effectiveness of this drug is now hardly in doubt, but the advantage of such a general background of treatment as we have sketched cannot be over-emphasized. Prontosil cannot always work miracles, and it will not cure every case. Some cases of puerperal sepsis, especially those with

general peritonitis, are fatal from the onset, and any form of treatment is useless. The dosage of Prontosil must be accommodated to the clinical condition, but our object should be to push the drug until the system is saturated, after which it can be reduced. Thus in a severe case 15 grains of Prontosil album should be given by mouth three times daily, and this should be reduced only as the pyrexia subsides, while for five days after the temperature is normal 7½ grains should be given once daily. In any event a certain degree of cyanosis is apt to develop during the treatment: but if sulphur compounds, such as magnesium sulphate, are given at the same time, the condition of sulphæmo-globinæmia may develop, and an extreme degree of cyanosis occur, which may be terrifying in its intensity. But with a temporary reduction or withdrawal of the drug this condition soon disappears. This accidentally discovered drug, whose exact method of action is not yet clearly understood, represents a most important addition to our armament in the fight against puerperal sepsis, and it is mainly as the result of this that our maternal mortality has now fallen to the low level of 3.13 per 1,000 births.

RETROVERSION.

The *incarcerated retroverted gravid uterus* which may be encountered about the third month may form an urgent emergency most distressful to the patient. Many methods of treatment, such as putting the patient in the knee-chest position, traction on the cervix with volsella, and upward pressure in the posterior fornix, have been advocated, but they are uncertain and can mostly be disregarded; while rough manipulation may produce abortion. Again the

importance of deep anæsthesia is found, and if the bladder be first completely emptied by catheter the uterus can usually be easily mobilized upwards by simple pressure and retained in position by a pessary for three weeks. But the best method of all, which requires no anæsthesia, is simply to empty the bladder completely and *slowly* by a narrow rubber catheter. In this way the bladder may be half emptied at first, and it may take several further insertions before it is completely emptied. By these means alone the uterus will be found in practically every case to have spontaneously regained its normal position, and if the bladder is not allowed to get distended again the probability of recurrence is very slight.

I have purposely confined my remarks to some of the more common obstetrical emergencies, and I have discussed these largely as I have found them, and from my personal clinical experience, so that I have omitted all reference to figures and percentages. Again, I have looked at the conditions from the point of view of domestic practice with all its limitations, so that such invaluable adjuncts to treatment as blood transfusion or Cæsarean section in appropriate cases of ante-partum hæmorrhage have not been discussed; and it has been supposed that a well-equipped hospital is not at hand, and that the patient has to be treated at home. Finally, from what has been said it will be clear that he who knows his case best before confinement and who interferes the least during confinement will experience the minimum of obstetrical emergencies, and will be able to meet them to the best advantage.

RECENT ADVANCES IN SURGERY.*

BY

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WE often speak somewhat glibly of recent advances. But "recent" may mean anything from the last five years to the last fortnight, and the adjective is almost a direct negative of the noun it qualifies. When a thing is recent it is impossible to say whether or no it is an advance; when its value has really been established, it is no longer recent. For by an advance I must insist that we mean something better and not merely something newer, and it is indeed difficult to distinguish the good from the merely new. It is not enough to read the communications in the journals; we must also know something of the ability, experience and integrity of the writer. For to-day the methods of journalism and high pressure business have invaded even the world of science. The young surgeon who would make a reputation need no longer set out to build it up by research and honest careful work. He gets a secretary to run through American and foreign literature, a professional illustrator working constantly on drawings, photography, slides, and films, and an impecunious registrar to do the writing. As the nominal head of this syndicate he packs the journals with his articles, the publishers' shelves with his volumes, and the students' heads with ill-digested statements. What stands declared as an advance may therefore be no more than the untried assumption of some second-rate theorist in another continent.

* A Paper read before the Society on Wednesday, 8th February, 1939.

Because it is in many ways the least important aspect of surgery, I would first say something of surgical handicraft. Operating has become incredibly better within the last fifteen years, and the young men who are serving their apprenticeship to-day, if they continue to work hard and to keep humble, should all become the equals, in technical achievement at any rate, of the greatest masters of the past. Part of this improvement is due to advances in architecture and engineering: the tables, the lights and the instruments with which the modern surgeon works are all about as perfect as they can be. Part of it is due to increasing standardization in operative procedures. There are still any number of different ways, all permissible, in which an operation can be done. It is remarkable in such a set piece as a sub-total thyroidectomy, where the object of attack and its surroundings are absolutely constant in their mutual relationships in every patient, where the same four arteries and six veins are always encountered and the same two nerves always avoided, how in different centres surgeons of equal skill use different methods. But pretty well all the ways are known, all have been tried and described, and the really bad ones have all been discarded; the young surgeon now loses no time in experimenting, but has merely to select the method that appears best to him. Most of all, the improvement is due to greater opportunities offered at an earlier age. Posts are no longer won by waiting and teaching alone, but students of promise are trained to operate by apprenticeship while their brains are receptive and their fingers nimble, and they learn to use their hands with that deft certainty and artistry that can never be acquired by those who start on any craft in middle age.

Asepsis is interpreted far more rigorously to-day

than even a few years ago. It is more than sixty years since Lister preached his gospel, and from the beginning of the present century all operations have been conducted under avowedly sterile conditions. But only lately has the difference been appreciated between healing by "first intention" and hundred-per-cent., copper-bottomed, first intention healing. In the first the wound never suppurates and the scar is covered by epithelium when the stitches are removed; but the patient runs a slight temperature for a few days and dislikes moving the injured part, the site of the incision is a little raised and a little warmer than its surroundings, the scar is two or three millimetres in diameter and reddish purple. In the second there is no constitutional disturbance, pain is unusual, the parts look normal right up to the incision, and the scar is a hair line by the fourth day, and practically invisible by the fourth week. Ten years ago such healing was the exception; it is now the rule.

In asepsis, preparation of the skin is unimportant and largely a matter of fashion, yet it is a ritual that marks the individuality of the clinic. Speaking surgically, the continental abdomen is white, the British abdomen brown or blue, the American one pink or red; in other words the French and Germans pin their faith to spirit, the English to iodine or the aniline dyes, the Americans to mercury preparations.

The two dangers at an operation in a properly run theatre on a patient from a properly run ward (that is, where preparation and sterilization can be trusted) are the entry of air-borne organisms, and droplet infection from a spectator or member of the team. Those who fear the first insist on filtered air in the theatres; others believe that such organisms are scanty and of low pathogenicity, and that they can be excluded or

at any rate rendered innocuous by ordinary precautions, and particularly by careful handling of the tissues. If nothing is left at the end of an operation but clean-cut surfaces carefully approximated, and there is no devitalized tissue or blood on which they can grow and no dead space where such culture medium can accumulate, any bacteria that may have entered by chance will be killed before they can multiply. Among this school there is a definite tendency to use very fine thread or silk in place of catgut for ligatures and for the majority of sutures. Catgut is bulky, unreliable, irritating and sterilized with difficulty. It has one good quality only, that it is eventually absorbed, but it disappears with a scuffle of leucocytes in the midst of an œdema that can be felt through the surface. Thread of 100 gauge will do the work of No. 1 catgut; and since knots are secure and ligatures may be cut short, it only takes up one-hundredth of the bulk. It is inert and needs no chemicals, but remains unresented among the tissues. Cranial surgeons have shown repeatedly that a wound closed with interrupted stitches of fine silk can be reopened at any time and will present the appearance of fresh undisturbed tissues. Thyroidectomies done with the same material show an equal improvement over a series done with catgut.

Droplet infection, however, is a very real danger. The human throat always contains streptococci, and may harbour hæmolytic strains of extreme virulence even when the carrier is apparently in perfect health. A few such organisms introduced into an operation field may set up a peritonitis or meningitis that is fatal within forty-eight hours. Such infection can be avoided entirely by the provision of proper masks; these may be made impervious to air and moisture by a layer of cellophane, so that the expired air is deflected

backwards past the ears; or they may be of such a thickness of gauze, ten layers having been found a minimum for this purpose, that no moisture can penetrate them. In any case the mask must cover the nose, and every unsterile person who approaches the patient, particularly the anæsthetist, must wear one.

While the members of a surgical team can be trained in every precaution against infection, the same cannot apply to spectators, who may be untrained students or casual visitors, and who can contaminate the operation field at a considerable distance, particularly if they are accommodated in stands or galleries above the level of the theatre floor and if they shout their questions. The tendency in modern theatre blocks is to segregate spectators entirely. The days are gone when an operation was a *tour de force* performed on rare occasions, when crowds assembled to see a leg come off or an abdomen opened, when the word "theatre" seemed the apt description for a room designed to allow the maximum number to view the spectacle. Operations are performed every day in every theatre of a hospital. They are mostly standardized procedures that are described with great detail in text-books of operative surgery, and the visitor gains little by watching unless he is near enough to see the details of the surgeon's technique. Such positions are reserved for members of the team in training, and one or two expert and privileged friends of the surgeon. Medical students, post-graduates, and visiting societies must be placed in galleries; and in all new theatre blocks, such as that being built at the Massachusetts General Hospital, these galleries are part of a spectators' unit, on the floor above and entirely separate from the operating unit. On the surgical floor, which is limited to surgically clean personnel and materials, are the

theatres on one side of the passage, changing and store-rooms on the other. On the visitors' floor are registration and cloak rooms, rest room, and educational demonstrations above the changing rooms, while on the opposite side are a series of galleries, over the door of each of which a signal lights up to show when an operation is in progress. This gallery has a plate glass wall over the theatre through which, with field glasses, the image of the operative field can be brought to within two feet of the eye : but it is entirely sealed off, so that spectators can wear ordinary clothes, and can gossip or smoke without disturbing the surgeon. Communication is by two-way microphones and loud speakers, so that instructions from the theatre and questions from the gallery are relayed in that nasal bleat that seems inseparable from mechanical voice reproduction. A disadvantage is that occasionally a chance aside may be bellowed fortissimo, to the confusion of the speaker.

Among the dangers increasing the risk of operation, hæmorrhage stands out as the most dramatic, and also the most easily combated if we have the blood. The dangers of transfusion are known, its technique mastered. But because the supply of donors is limited, and confined almost entirely to voluntary helpers upon whose humanity we do not wish to impose unduly, we are apt to limit the use of transfusion to those cases where we feel there is actual danger unless it is done, and hesitate to employ it in the many where it might make operation much safer, or aid recovery considerably. As so often happens the remedy is simple and ready to hand. At each birth, an average of 125 c.cm. of blood is at present thrown away in the placenta. This can be expressed, grouped, citrated and kept in the refrigerator, where it will

remain in excellent condition for at least eight weeks. This placental blood is not only healthy and free from extraneous proteins, but it contains one and a half times the normal proportion of red cells. Further, since the distribution of blood groups in the new-born is the same as that of the general population, this free blood reserve from the labour ward will be qualitatively adjusted to the demand.

Placental blood has been used successfully at Montreal for several years : and though British workers writing within the last few weeks have stated that the amount to be obtained is not sufficient to justify the trouble involved, and that infection is not easily avoided, the method has so many advantages that it should not be abandoned lightly. The preservation of blood is likely to assume increasing importance in the future. During the war, reserves were collected at some of our Casualty Clearing Stations before a big engagement, and kept successfully for a few days. But the technique of storage has since been elaborated by the Moscow Institute of Hæmatology, where it is claimed that corpse blood may be preserved for at least two months by mixing it in equal quantities with a fluid that is roughly Ringer's solution with sodium citrate added. The use of corpse blood has a ghoulish sound to our ears, and it is unlikely that it could be openly advocated or employed in any western country. But the technique is equally applicable to freshly drawn blood from volunteers. The medical services on the Republican side in Spain organized a system whereby healthy men on leave or in factories gave their quota to a collecting centre, whence supplies were dispatched in large containers to the advanced ambulance units. Should an emergency ever come in this country, transfusion would immediately become

one of the most important measures to save life among the casualties of an air raid, in circumstances where the leisurely collection of blood from individual donors would be impossible.

Perhaps as the outcome of this gradual but very definite improvement in surgical handicraft, there has come about a more obvious appreciation of the fact that surgery is a highly skilled art. The public have always been ready to grade athletes and musicians, to pay two guineas to hear Kreisler play the "Humoresque" while they consider the street violinist well rewarded with twopence for rendering the same piece; but they have valued all surgeons alike whether they possess a pass degree or a high diploma, whether they are newly qualified or have worked for many years on the staff of a hospital. Even our own profession has been wont to judge results as those of the operation rather than the operator, and to look on the man with a mortality of under 5 per cent. for gastric surgery as a good liar rather than a good surgeon. But we find now in many quarters an acknowledgement of the fact that surgery is not just surgery, but excellent, good, bad, indifferent or deplorable; particularly is this accepted in the surgery of cancer.

A fair comparison between the alternative methods of treatment in this disease has always been difficult because of the difficulty of finding reliable and impartial statistics. Every surgeon knows that good radium treatment will give better results than bad surgery, and that good surgery is preferable to bad radium. But official publications from radium centres have been vitiated by two things; that the cases are graded, on grounds which are not apparent, into an "operable" group which is far smaller than the proportion operated upon in a surgical clinic and which contains all the

good results, and "inoperable" and "advanced" groups for the failures; and that the results are compared with those of very indifferent surgery. I was, therefore, interested, on visiting the Christie Institute at Manchester last November, to find that Ralston Paterson considers that, as far as the glandular field in the neck is concerned, the safety conferred by a block dissection well performed is greatly in advance of what any form of radiation can offer. The emphasis is on "well performed," and this, at the Christie Institute, means performed by Mr. Douglas. I had the good fortune to see this surgeon do one such dissection, and I should agree that it was a complete and anatomical clearance of all the lymphatic structures on that side of the neck more skilful and more thorough than anything I had seen in this country or the Continent; and could well understand the aphorism I had heard that afternoon, that recurrence after a block dissection indicated that the operation had not been done by Douglas. In the case of the breast, I had always been dissatisfied by Keyne's comparison of the five-year cure-rate for operable cases treated by radium, one of 63 per cent., with a similar figure for early cases treated by the radical operation: his figures for surgery were taken from the massed results of a large hospital. It is therefore very satisfactory indeed to see Gordon Taylor's carefully recorded personal figures, giving a ten-year cure-rate of 85 per cent. in cases without glands; a remarkable tribute to his well known technical skill and courage, and a stimulus to all those whose results are less satisfactory to study his methods. This is not a unique achievement, for a similar five-year cure-rate of 85 per cent. was reported ten years ago from the Leeds Infirmary.

While most surgical advances are in method, new

problems arise from time to time. A group of diseases that was unknown ten years ago, but that is of considerable interest at the present time, is that of the functioning adenomas of the ductless glands; tumours that give symptoms, not only from their presence and from increased pressure, but from producing some hormonic substance in excess. At the end of the war the only example of this group that was known was the "pituitary tumour" associated with acromegaly and gigantism. We now know that this particular syndrome is associated with an adenoma of the acidophil cells of the anterior lobe, that adenomas of at least two other kinds of cell may be found in the pituitary, and that similar functioning adenomas occur in other ductless glands, giving strange clinical pictures and sometimes affording the pathological explanation of a disease long known.

The chief members of this group, and their leading symptoms, are:—

ADENOMA.	SYNDROME.
Pineal	Dwarfism with sex precocity.
Pituitary: Acidophil ..	Gigantism when occurring during the growth period; acromegaly when appearing in adult life.
Pituitary: Basophil ..	Sex dystrophy; amenorrhoea in the female, impotence in the male, excess of hair in both.
Pituitary: Neutrophil	Pressure symptoms only: endocrine picture of pituitary deficiency.
Parathyroid	Mobilization of calcium: disappearance from skeleton, increase in blood and urine, increased phosphatase, decreased phosphorus.
Adrenal: Cortex ..	Precocious sex and muscular development in males. Virilism in females, with amenorrhœa, change of voice, and male distribution of hair.
Adrenal: Medulla ..	Paroxysmal hypertension.
Pancreas: Islet ..	Hyperinsulinism and insulin fits.

These tumours are mostly rare, and I do not wish to take up your time with a discussion of rarities, but I will touch on four of them that present points of particular interest.

The clinical picture of the parathyroid adenomas has been made familiar to all of us by the stimulating series of papers coming from the pen of Donald Hunter at the London Hospital, and numbers of cases are now reported every year. The steps by which this picture was put together are, however, less familiar, and are worth recording. Von Recklinghausen in 1891 described the condition of general fibrosis of the skeleton, with multiple cyst formation, which is known by his name, and which has been reported from time to time as a rare curiosity. In 1904 Askanazy reported a case of von Recklinghausen's disease associated with a parathyroid tumour. At the time this observation passed unnoticed, but as more cases were reported, it became recognized that there was some association between the two conditions. It was thought, however, that the parathyroid enlargement was secondary to the bone disease—an attempt to lay down more calcium. Acting on this theory Mandl of Vienna in 1926 inserted multiple parathyroid grafts into a patient with this disease, and found to his surprise that the condition got worse instead of better. He then exposed the thyroid, and found a small adenoma of the parathyroid, which he removed. Almost immediately calcium began to be laid down in the softened bones and the cysts to be filled up. As a result of this historic operation, we now recognize the clinical picture of a parathyroid tumour. There is wide-spread absorption of calcium in all the bones of the skeleton: in addition, multiple foci of osteitis fibrosa, with cysts or giant cell tumours, are found in the long bones and the skull:

the calcium content of the serum is raised and the phosphorus lowered; in the urine there is a greatly increased output of both calcium and phosphorus.

When this picture is encountered, a parathyroid tumour can be diagnosed with certainty, removal of which is followed immediately by a return to normal of the calcium in the blood and urine, and later by deposition of calcium throughout the skeleton. But Oliver Cope, of the Massachusetts General Hospital, has demonstrated two other clinical manifestations of parathyroid over-activity. The first may be called the "poor negative" syndrome. Calcium is removed from the skeleton, but without any bending or localized cyst formation. The patient may be admitted to hospital suffering from a fracture caused by ordinary violence and is sent for X-ray. The films when returned show a very poor shadow of the bones; indeed, if they are not accompanied by an apology from the radiologist, they usually evoke a bantering request from the surgeon for something a bit better next time. When successive films turn out to be equally poor, it is realized that the fault is in the bones rather than the apparatus, and an investigation of the calcium metabolism will settle the diagnosis. The second atypical expression of hyperparathyroidism is the formation of multiple renal calculi. These less common indications of a parathyroid tumour must be borne in mind, since the most important aspect of their treatment is the removal of the tumour; if this is not done, other fractures will occur, and fresh renal calculi will form after the first have been removed.

The Islet tumours, or β-cell adenomas of the pancreas, are important because they are commoner than we realize, and because their victims, who might be cured if the diagnosis were known, are often going

about with the false label of "epilepsy" or *petit mal*, or are regarded by their fellows as "just peculiar." The typical history is that an individual, previously normal, begins to suffer from "fits" or fainting attacks. These attacks are apt to come in the morning, after severe exertion, or when for any reason the patient has remained unusually long without food. It is characteristic that the sufferer recognizes that he can avert a threatened attack by taking food, and in many cases realizes that a sweet drink is even more effective than a meal. The attack is preceded by a feeling of something amiss. It can be delayed for some time by will power, and the patient can usually finish what he is doing or seek help. At the beginning of an attack the conduct may be irrational. Unconsciousness supervenes, during which there may be twitchings of the limbs or attempted movements may be done in a violent manner, but there are no true convulsions. The patient starts to revive as soon as the sweet drink is given, and will often finish the drink himself. With the advent of insulin treatment, the similarity to the effects of an overdose of insulin at once suggested the correct pathology, and the syndrome was first recognized by a doctor sufferer, who died at the Mayo Clinic in 1927. The diagnosis is confirmed by an estimation of the blood-sugar, which shows a fasting value of 25 to 60 mgm. per 100 c.cm. instead of the normal 100 mgm., and of the sugar tolerance, in which a return to a subnormal blood figure occurs in four or five hours.

The treatment is by operation, with exposure of the pancreas and removal of the tumour. Three such operations were successfully performed by Howland, Fisher, and Graham, in 1929, 1930, and 1931, and in each case the blood-sugar returned to normal within

twenty-four hours. But several surgeons failed to find any tumour in typical cases: and Graham, after his first success, was disheartened by drawing a blank in his second. The subsequent history of this case is an interesting example of how progress in one branch of surgery may lead to advance in another. Graham, whose work at Toronto on the surgery of the stomach is well known, became converted to Finney's operation for lesions at the pylorus, and was interested to find how well the whole duodenum could be mobilized by proper dissection; and further, how, when the duodenum was free, the head of the pancreas came up with it and could be palpated between the fingers. He sent for his former patient with hypoglycæmia, re-opened the abdomen, and was delighted to find in the head of the pancreas the tumour which he had been unable to feel at the previous laparotomy. It is now believed that these β-cell tumours show a preference for the head of the pancreas, and that one will always be found in a case giving the typical history of hypoglycæmic attacks.

The functioning tumours of the adrenal medulla are much rarer than the adenomas of the parathyroid and the pancreas. Three only have been encountered at the Mayo Clinic. They give rise to attacks of arterial hypertension, that are accompanied by symptoms very like those of paroxysmal tachycardia—headache, dizziness and a sensation of bursting in the chest. The attacks are brought on by exertion or excitement, and are characterized by a sudden rise of the systolic blood pressure by as much as 100 mm., and an equally sudden drop. The diagnosis is confirmed by laparotomy, and the attacks are cured by removal of the tumour.

Tumours of the adrenal cortex have long been

recognized as associated with sex precocity and exaggerated muscular development in children, and the older generation will remember the striking picture of such an infant in Bland Sutton's *Tumours Innocent and Malignant.* To-day their relation to virilism in women is the subject of intensive study in all parts of the world, and particularly in London, where my friend Broster has made this curious subject his special study. Bearded women have been known throughout the ages. Sometimes they were canonized as saints, sometimes they were burnt at the stake ; in our day they are objects of pity, for they are rendered self-conscious by their misfortune, and excluded from many of the joys of social intercourse. Cortical tumours have been found in many, and their removal has restored the patients to normality. Broster and Vines describe a fuchsinophil staining reaction exhibited by the cortical adrenal cells in all their cases of virilism. During my recent visit to America I found that this same subject was also interesting their surgeons very greatly, but that they had as yet been unable to reach any generally accepted conclusions. It appears that an identical clinical picture may be given by a cortical adrenal tumour, by adrenal hypertrophy, by a basophil adenoma of the pituitary and by an arrhenoblastoma of the ovary (a tumour probably composed of testicular cells). Further, some patients with typical virilism have died, and at post-mortem no recognisable change has been found in any of their ductless glands. The pathology of this sex change cannot be said to be settled, but in a pronounced case bilateral exploration of the adrenal glands is amply justified.

Two other subjects I will touch upon, because they interest me particularly, but I will do no more since I

discussed them fully in a recent article in the *British Medical Journal*.[1]

Arterial hypertension is a disease that we usually associate with the later years of life. Modern conditions, and particularly the harassing strain and fierce competition of business life in the large cities, are bringing a fresh problem, that of the young man of under thirty who finds himself unable to work because of intolerable headaches, failing vision and inability to concentrate, and who is found to have a systolic blood-pressure of from 200 to 250 mm. of mercury. This type of patient is relatively common in America, and it is in that country that an attempt is being made to provide a surgical treatment for those cases that fail to respond to medical measures. Various operations have been devised, all owing their origin to the observation of the profound drop in blood-pressure that follows the administration of a spinal anæsthetic, and all being designed to produce a similar though permanent dilatation of the vessels in the splanchnic area. Heuer in New York does a laminectomy and divides the anterior roots from the sixth to the twelfth dorsal. Adson of the Mayo Clinic divides the splanchnic nerves below the diaphragm, and also removes the first two lumbar ganglia and part of the semilunar ganglion. Crile removes the whole semilunar ganglion on each side, and divides the branches going to the adrenals. Peet at Ann Arbor removes part of the splanchnic nerves and the lower two ganglia of the thoracic sympathetic chain through a bilateral extrapleural approach. Of these operations that of Heuer appears to be most severe, that of Peet the simplest and possibly the most satisfactory.

[1] "The Changing Ground of Surgery." *Brit. Med. Jour.*, 4th June, 1938. Vol. i, p. 1,193.

It is very difficult as yet to assess the place, if any, that these operations will ultimately come to occupy in surgery. Two types of case must be excluded at any rate; those that react well to medical measures and do not need operation, and those that have permanent arterial damage and cannot be improved by any means. When these two groups are eliminated, the number that remains is a very small one, and it appears from a study of the literature of the subject up to date that the majority of the successes of operation are in that small group of young patients without arterial damage who should react to rest, elimination of septic foci, and change of environment. Occasional dramatic successes, such as that of a young surgeon who, having lost his post and abandoned his career because of headaches and impending blindness, was operated on four years ago and has since remained in full work with a normal blood-pressure, serve to emphasize the claims of those who see in the surgery of hypertension the solution for the troubles of civilization.

Ulcerative colitis is not a new problem, but it is a comparatively new one to surgery. The disease appears to be getting commoner, and though we have learned nothing of importance about its cause, we have seen enough of its progress to regard our efforts in treatment hitherto with profound dissatisfaction. Some patients get better after a short course, and remain well. The great majority relapse after a period of improvement, and with succeeding attacks are brought back to a condition of tolerable equilibrium with increasing difficulty, and never emerge from a state of invalidism. The ultimate mortality is close on 100 per cent. The operative treatment is by a complete transverse ileostomy, bringing the whole of the intestinal contents to the surface of the abdomen. The colon, emptied and

rested, rapidly becomes sterile. If the ileostomy has been done early in an acute case, the colon may recover its normal appearance and contractability, and it will be possible at a second operation to join up the ileum and restore the alimentary canal to normal. In other cases the large intestine, though recovered from the acute infection, remains scarred and contracted and incapable of resuming its normal function. In such the colon must be resected as soon as the patient is well enough. In a few cases the pelvic colon and rectum recover enough to function again, and the distal ileum may be implanted into the lower colon after the upper portion has been removed. In those with severe ulceration the ileostomy must be looked on as permanent, but the lower ileum soon acquires the power of absorbing water, and the discomfort of the fistula is less than that of a colostomy. The patients, who have perhaps been at death's door for months and only kept alive by transfusions, are restored to robust health and able to resume their normal occupations.

Much more important, to my mind, than any of these recent discoveries of rare diseases or new treatments, is the clarification of our views on some of the more important diseases as the result of new work, and the tendency to an agreed attitude among the majority of experienced surgeons, at any rate, in the English-speaking world.

In peptic ulcer we see a general acceptance, as a working hypothesis at any rate, of the view that gastric and duodenal ulcers are separate and distinct diseases. Gastric ulcer is above all a deficiency disease. Its typical victim is a depressed, overworked and undernourished woman of middle age, with bad teeth or none at all, a long hypotonic stomach whose greater

curvature hangs low in the pelvis, and a low acid curve. The ulcer is curable by medical means in its early stages, but if not so cured shows an inclination to chronicity, and when fixed to the posterior abdominal wall becomes entirely resistant. In my opinion it has a definite tendency to malignant transformation. If therefore a gastric ulcer is not cured within a reasonable period by medical treatment, it should be handed over to surgery. The results of partial gastrectomy are excellent, and stand the test of time.

Duodenal ulcer is the outcome of high-pressure living. The typical sufferer is a young business or professional man, married and mortgaged, bolting his meals at irregular intervals between cigarettes and telephone calls. He has a small stomach placed transversely in the epigastrium, rapid emptying, and a high acid curve that ends abruptly at the peak. If the duodenal patient can be persuaded to mend his ways, the ulcer will disappear without surgery; if he cannot, surgery, unless it is of a most drastic nature, will give him only temporary benefit. One of the most manifest changes in the surgical outlook within recent years is that the great body of men of experience and judgement are agreed that in duodenal ulcer operation should be reserved for the complications—perforation, stenosis, severe hæmorrhage—and not be looked upon as a cure for the ulcer tendency.

The treatment of gastric and duodenal hæmorrhage has been the subject of much controversy, but the writers who consider all cases with a history of hæmatemesis together, and do not attempt to separate severe from trivial bleeding, obscure rather than clarify the outlook. Gordon Taylor, Arthur Allen, and Finsterer, on the other hand, have made this distinction, and in consequence their papers suggest

a reasoned basis for action. Hæmatemesis in itself, however severe, is no indication for operation; many of the worst are due to splenic disease, cirrhosis of the liver, or acute mucosal infections. Acute ulcers, again, do not call for surgery. But where a patient with a known chronic ulcer has had a hæmorrhage of a pint or more, operation should be very seriously considered. If there have been previous hæmorrhages of equal severity, or if the patient is over fifty, operation is certainly advisable, and should be undertaken at the safest opportunity.

The decision when to operate in this particular group, the large hæmorrhages from chronic ulcers in patients over fifty, is one of the greatest difficulty, but certain observations will help in this decision. It has been shown that if the bleeding has ceased at the end of twenty-four hours, 60 to 80 per cent. of the patients recover, but if the bleeding still continues up to forty-eight hours 75 per cent. of them die. On the other hand operation in the first forty-eight hours only has a 5 per cent. mortality if it is done by an experienced gastric surgeon under local anæsthesia with a continuous blood transfusion. After forty-eight hours the mortality, even under the same favourable conditions, approaches 80 per cent. Transfusion may bring the hæmoglobin almost to the normal level, but the patient seems to have lost something that cannot be replaced by blood alone, and though it is in the late cases that operation is often most urgently demanded, it is so uniformly fatal that it should not be undertaken. To sum up: when a patient over fifty with a chronic ulcer has a hæmorrhage of over a pint, a physician and a surgeon should examine him together and take joint responsibility for his treatment; he should be transfused, and the decision

whether to operate or not must be made in the first twenty-four hours.

Some of these changes, these crystallizations of opinion, concern what are no more than minor maladies, but are none the less important to patients and therefore to us. I have chosen a group joined by no more secure link than the word "injections," but that word with its vague association with vaccines and hormones, its suggestion of the introduction of mystic fluids "into the system" by routes other than the natural ones, its implied avoidance of "cutting operations" has a great appeal to the public.

The injection of varicose veins has been practised sporadically since the beginning of the century, but it enjoyed a sudden increase in popularity about six years after the war. Various solutions were tried, first salicylates, then quinine and urethane, later sodium morrhuate. Occasional disasters were recorded, and local sloughs were comparatively common at first, but a satisfactory technique was soon elaborated. The outstanding development of the present time is that we have come to realise that the chemical sclerosis of veins can seldom be looked on as a cure, but is rather a temporary palliative or at most an adjuvant to other measures. If the valves guarding the saphenous trunk are incompetent, as they are in practically all patients that come to hospital out-patients complaining of varicose veins, the pressure will always open up a channel, either by dilating collaterals previously invisible, or by canalizing the clot in the main vein. In practice it is found that very few veins treated by injection alone remain obliterated for two years, and many reappear within six months.

The present treatment is by saphenous ligature in all cases that give a positive Trendelenburg test. The

old Trendelenburg operation, ligature of the internal saphenous vein in Scarpa's triangle, is insufficient to ensure immunity from recurrence, since blood may reach the trunk lower down by two routes; by anastomoses between the uppermost branches, the superficial external pudendal, superficial epigastric, and superficial circumflex iliac, and the lower ones, the medial and lateral femoral cutaneous; and by communicating veins between the trunk and those under the deep fascia. Now the saphenous vein is exposed two inches below the pubic spine, and all branches between this point and its entry into the femoral vein are divided. The vein is then ligatured above, and divided: and through the lower portion a long needle with a ball point is passed down to the level of the knee, and 5 to 7 c.cm. of sodium morrhuate solution is injected to obliterate all branches and deep communications.

This new Trendelenburg operation can be done at out-patients under local anæsthesia, and gives excellent results. Injection is reserved for purely local varices where Trendelenburg's test is negative, and for sections remaining dilated after ligature.

The injection of hæmorrhoids is a slightly different problem. In varicose veins we inject into a closed space, limited by definite walls with an endothelial lining easily destroyed, and filled with a substance that coagulates and becomes converted into firm fibrous tissue. We destroy the lesion, the whole lesion and nothing but the lesion. Hæmorrhoids are varicose veins, but we do not inject into the veins but round them: and we cure them, not by coagulation, but by producing a submucous fibrosis round them, whose extent is limited only by the amount of the injection and not by any anatomical barrier.

Injection of hæmorrhoids is an excellent palliative when performed by the expert, but it has dangers. Ischio-rectal abscess and fistula may follow and even death from portal pyæmia may occur. An occasional sequel is over-fibrosis, the channel being left rigid and the mucous membrane unduly fixed, so that it cracks and tears with any but the softest motions. Patients like the injection treatment of hæmorrhoids because it avoids the pain of an operation, the danger of an anæsthetic, and the interruptions to work that both imply. Proctologists usually like it, because they acquire the requisite knack in its use. General surgeons see the bad results, and view it with toleration, loathing or fear, according to their experience in this respect. There appears to-day a tendency to limit the use of injection to the treatment of single piles that are bleeding. The relief obtained is never permanent. The modern operation as described by Milligan and Morgan, on the other hand, can be looked on as a permanent cure. A wide V of skin and a smaller one of mucous membrane is dissected inwards off the sphincters as far as the ano-rectal ring at the three primary piles, and the base is ligatured, but no suture is put in. When performed with the cutting electric cautery, combined with Eucupin injection into the rectal wall, this operation is almost painless, and it is perhaps the only one in surgery that gives 100 per cent. good results and no recurrences.

When we come to the injection treatment of hernia, we are departing still further from rational and scientific therapy, for we are injecting not into a vein or round a venous plexus, but into muscular planes. The treatment is intended, not to sclerose the hernial sac, but to produce fibrosis in the inguinal canal by causing a sterile chemical inflammation. The injector therefore

sets himself the task of converting the muscles that surround the sac and cord into a sheet of tough fibrous tissue that will contract down on to the sac at its neck sufficiently to obliterate it, yet will not press on the vessels or nerves of the cord. Failure in either direction means that the patient is worse off than before. If the fibrosis is too little, a wide-mouthed sac is reduced to a rigid cartilaginous chink like the canal of a femoral hernia, that will be prone to strangulation ; if it is too much, the cord will be compressed and hydrocele, varicocele, testicular atrophy or neuralgia will follow.

It may seem a waste of time to criticize so futile a method, but I can assure you that the injection of herniæ is a flourishing racket, and you will meet it in Bristol. Various cures of rupture by producing inflammation in the inguinal canal have, of course, been practised from the earliest times by witch doctors and the itinerant quacks who visit fairs, and they occasionally produced cures ; but the method was put on the map by Ignaz Mayer, who introduced the following formula :—

Zinc sulphate	1 dr.
Phenol crystals	6 dr.
Glycerine	4 fl. dr.
Cinnamon water	1 fl. oz.
Fluid extract of Canadian pine (dark) ..	5 fl. dr.
Sterilized chemically purere distilled water	2 fl. oz.

Thus, with a convincing patter and a prescription akin to that of the witches in Macbeth, the hernia curer becomes a man of science. If he fails, it can always be said that the Canadian pine was not dark enough or did not really come from Canada. I found in the United States that the injection treatment has been widely tried—for the American surgeon will give anything a trial—but abandoned in all reputable

clinics. Their experience is that the pain and suffering involved is greater than with operation and the waste of time much greater ; that at least half of the so-called cures fail ultimately ; that of the failures many strangulate ; and that when a patient who has been injected requires operation, either for strangulation or recurrence, nothing can be done to help him, the complete destruction of all layers preventing any satisfactory type of repair.

Discussion of injection leads us to another related subject, the treatment of undescended testes by hormones. It has, in common with the others, the popular appeal of the magic hollow needle, and of operation avoided, but it is a biological and not a local treatment, and has undoubted successes to its credit. Every large hospital has its series of cases treated with Pregnyl or some related substance. That undescended testes descend into the scrotum following hormone therapy has been proved ; but the proportion that do do so is on the whole disappointing, and the symptoms of precocious puberty that usually appear at the same time, especially the enlargement of the penis (often to grotesque proportions) are distressing to the parents, and raise the uncomfortable query whether other endocrine disturbances may not also be taking place.

Observation of patients under treatment over several years, and frank discussion of all aspects of the question at the Association of Surgeons and at medical societies, has led to something like agreement on certain points :—

1. An undescended testicle is not coming to any harm before puberty because of its inguinal position, and is certainly not atrophying.

2. A surprising number of such testes descend at puberty—90 per cent. according to one school doctor.

3. When they do not descend, the cause is nearly always a mechanical block, not a hormonic deficiency.

4. Endocrine injections are called for only when there is evidence of endocrine deficiency—that is, in underdeveloped boys, with excess fat and infantile genitalia. In normally developed children they act only by forestalling what would happen naturally in a year or two. In such normal children they are not merely unnecessary but probably harmful. When one testis is already in the scrotum, to give hormones to help the other is worse than unnecessary, it is half-witted.

5. Operation is unnecessary before puberty unless there is a hernia, or descent is arrested by some obvious mechanical block : after puberty it should always be done.

Talking about recent advances is a lot of fun, and it is in that spirit that we should regard it. The doctor is the guide, counsellor and friend of his patient. He must know something of everything. Above all he must know the broad principles of pathology and treatment that have stood the test of time and stand like rocks eternal. On their surface advances come when the wind blows, and flourish while the sun shines. But they do not greatly alter the outlines of the masses on which they grow.

Reviews of Books

A Synopsis of Medicine. By H. L. TIDY, M.D., F.R.C.P. Seventh Edition. Pp. xx., 1,187. Bristol: John Wright & Sons Ltd. 1939. Price 21s.—Tidy's *Synopsis of Medicine* needs no introduction. The Seventh Edition contains many new or rewritten sections. The result is a thoroughly up-to-date conspectus of internal medicine.

Shock and Related Capillary Phenomena. By V. H. MOON, M.D., M.Sc. Pp. xviii., 442. Illustrated. New York: Oxford University Press. 1938. Price 21s.—The spate of literature and research dealing with surgical shock during the Great War was followed by a low level in interest in the years following. We were tired of the subject. It awakened unhappy memories. Now after twenty years this book has been published, taking it up again, principally from the American point of view. Evidence is advanced that in surgical shock there is a concentration of the blood, shown alike by the hæmocrit readings, the rise in the specific gravity, and the increased hæmoglobin and red cell counts. The last is the easiest to read; the count may rise from five to nine million red cells. Fall of blood pressure is not a sign of shock, but of failure of compensation to shock; it is a late phenomenon. There is a reduced volume flow of blood before the pressure falls; the veins may be empty and contracted; the skin pale and flaccid. Shock is defined, therefore, as " a circulatory deficiency neither cardiac nor vasomotor in origin, characterized by decreased blood volume, decreased cardiac output, and by increased concentration of the blood." The reason why the circulating blood-volume is reduced is because of the opening up of all th capillaries of the body, especially of the viscera. The capillary dilatation is attributed to the chemical effect of damaged tissue cells; normally, a local damage to tissues liberates substances which dilate the local capillaries; in shock, this physiological process is exaggerated to catastrophic proportions. Blood volume is lost then, partly by pooling of the blood in the capillary backwaters, and partly by exudation of plasma into the tissues (œdema). At first general vasoconstriction of

arteries and veins suffices to maintain the blood pressure later this compensation fails. The same concentration of the blood may be seen in patients with acute abdominal emergencies; for instance, in a case of acute pancreatitis, dying of shock, the red cell count was 6,400,000, and the autopsy showed congestion and œdema of the lungs with capillary hæmorrhages. The deductions drawn for prevention follow the ordinary lines: avoidance of rough surgery, warmth, saline infusion, early removal of hopelessly damaged tissues, enough morphine to relieve pain. For treatment of developed shock, vasoconstrictors are useless. Gum-saline or blood transfusion help up to a point; an oxygen tent would seem to be logical to combat the anoxhæmia, and perhaps the administration of adrenal cortex hormone.

Ker's Manual of Fevers. By FRANK L. KER, M.B., Ch.B. Fourth Edition. Pp. xvi., 354. London: Oxford University Press (Humphrey Milford). 1939. Price 12s. 6d.—This fourth edition of the original manual is revised by Dr. F. L. Ker, son of the original compiler. The revision has been done with varying success under the different sections. For example, the portion dealing with the present advances in the prophylaxis of measles and preventive measures in diphtheria is well and clearly expressed. On the other hand, the section dealing with the chemotherapy of erysipelas is so vague that the student would be little the wiser after reading it as to the drug or dosage to employ for this disease. The clinical section on diphtheria is almost unaltered since the First Edition in 1911. This is unfortunate, as since that time malignant diphtheria has occurred in many parts of Britain and Europe due to the gravis and intermediate strains of bacillus. Cases due to these strains have caused great difficulty in diagnosis to the practitioner owing to the slow appearance of the characteristic membrane. No reference whatever is made to this type of disease—a serious omission—nor would most authorities agree with 24,000 units as the maximum dose of antitoxin. For the "acidosis of diphtheria" alkalies are recommended instead of intravenous glucose, which is coming into general use. Apart from these criticisms, the subject matter is well set out. The addition of a table of infectious diseases at the end is useful for students preparing for examinations, and one can recommend the manual to those commencing their studies of these diseases. The indexing is well done, but there is a complete absence of any references for those wishing to delve deeper into the subjects discussed.

Silicosis and Asbestosis. By A. J. LANZA, M.D. Pp. xxvi., 439. New York: Oxford University Press. 1938. Price 25s.—This book is the work of six experts who were among the pioneers in the study and investigation of Silicosis and Asbestosis. The contributors, four of whom are American and two British, have approached the subject from a different angle, and the seven sections of the book deal with the History, Ætiology, Symptoms and Diagnosis, Roëntgen Ray Diagnosis, Pathology, Experimental Pathology, Occupational, Preventive and Legislative Aspects in Great Britain, and Public Health and Economic Aspects in the United States of America. The result is probably the most authoritative, complete and up-to-date treatise on this most important industrial class of disease. In spite of the special nature of the subject, all the sections are very readable and the type and illustrations are excellent. An extensive bibliography is appended at the end of each section and there is a good index. It is inevitable that a certain amount of repetition should occur in the different sections, but this does not detract from their value. The only criticism one has to make is the presence of rather more printers' errors than one expects to find. These will no doubt be corrected in a future edition.

Personality Development and Social Control in Terms of Constitution and Culture. By IRA S. WILE, M.S., M.D. Pp. x, 57. London: Oxford University Press (Humphrey Milford). 1939. Price 3s. 6d.—One of the characteristics of post-war medicine is the conception that many "Diseases" can only be understood in relation to their social and economic settings, and that the patient's personality plays a vital part in this relationship. Sir Humphrey Rolleston and other writers have termed this movement "Neo-Hippocratic," and actually there is a revival of the philosophic approach to illness that characterized Greek medicine. This movement is associated with a considerable difference of opinion in details between the various schools, which is in reality evidence of a healthy spirit of criticism. Dr. Wile has reviewed this philosophic development in the course of four lectures that were delivered in London in 1937, which show all the hall-marks of deep thinking on current problems. He is particularly interesting on personality in relation to culture, and the influence of urban civilization is well summarized in his words: "Man's continued growth away from the soil has been attended with significant effects upon his structure and his capacity for adjustment to the crowd pressures he has multiplied. Cities create artificial

conditions that tax the human body less, and the human mind more. Despite the advance in creature comforts, urban life is a tremendous force in causing a lessening of nervous stability. It is too late to return to early forms or rural life, and it is therefore essential to evaluate urban difficulties in the interest of a reasonable mitigation of their securities." His remedies involve a consideration of current economic conditions and he predicts a far greater degree of social planning, essentially biological in its approach. Altogether this is a most stimulating little book that should be read by all interested in the sociological implications of our profession: they will find no trite remedies but much food for thought.

Play Therapy in Childhood. By C. H. ROGERSON, M.D. Pp. viii., 64. London: Oxford University Press (Humphrey Milford). 1939. Price 3s. 6d.—This short book is based on a study of thirty-six children during a two-year period. After giving a brief historical survey the author describes his own technique and summarises the play of four children. He then discusses in a straightforward but superficial way the relationship of the therapist to the child, the fantasies expressed in the play and the reasons for improvement. The views put forward represent a mid-way position between that of merely passive observation and the psychoanalytical approach with its transference situation and direct interpretation to the child of the inner meaning of the play. The book is clearly written and provides an excellent introduction to a subject which should be of interest to anyone concerned with children's psychological problems.

Clinical Examination of the Nervous System. By C. H. MONRAD-KROHN, M.D., F.R.C.P. Seventh Edition. Pp. xvii., 319. Illustrated. London: H. K. Lewis & Co. Ltd. 1938. Price 8s. 6d.—That this book has now reached its seventh edition is sufficient to indicate its value. Previous editions have been reviewed from time to time in this *Journal*. The continual advance of clinical neurology has again necessitated a complete edition of the book. Some of the chapters have been partly rewritten with a large number of additions and alterations, bringing the work into line with the advance of modern knowledge. There are many fresh illustrations, particularly in relation to ventrilography and encephalography, as these methods of investigation are becoming increasingly important. Other additions are a description of angiography, and also the method of examination of unconscious patients; while both positive and negative X-ray pictures are included.

In spite of these additions the work has been kept as concise as possible, and forms a thoroughly good and reliable guide for complete investigation of the nervous system.

Pye's Surgical Handicraft. By twenty-five authors: edited by HAMILTON BAILEY, F.R.C.S. Eleventh Edition. Pp. viii., 512. Illustrated. Bristol: John Wright & Sons Ltd. 1939. Price 21s.—This excellent book was first published fifty-four years ago and it still retains its popularity. It has been used with profit by generations of house surgeons, and it should be read by every student as soon as he has qualified, because it sets out to give just those few extra points of information which turn a good student into a good house-surgeon. The hints given on the post-operative treatment of thyroidectomies, the treatment of abdominal distension, circumcision and even on medico-legal reports, are invaluable. There is a very human note at the end on how a resident should collaborate with the nursing staff. Mr. Hamilton Bailey has done a service to this generation of house surgeons in placing his wide knowledge of practical hints at their disposal, and the publishers have maintained their usual high standard, both of paper, printing and illustrations. Altogether, both editor and publishers are to be congratulated on a very useful piece of work, and we heartily commend it to all would-be residents.

Cranio-Cerebral Injuries. By D. MUNRO, M.D., F.A.C.S. Pp. xxviii., 412. Illustrated. New York: Oxford University Press. 1938. Price 21s.—This book gives a full account of the management of cranio-cerebral injuries. It is based on the procedure adopted at the Neuro-Surgical Clinic at the Boston City Hospital. The enormous number of cases reviewed and the eminence of the author make the book peculiarly acceptable to all who have to deal with these accidents. The book is a complete survey, commencing with the first aid and casualty treatment, and concluding with after-care and home convalescence. No detail has been overlooked. The methods described are thoroughly sound and can be well recommended. A chapter on nursing methods has been included and is very helpful. Obstetricians and midwives will appreciate a long and well-argued chapter on cranio-cerebral injuries in the new-born. From this chapter, as indeed from the whole book, one receives an impression of enthusiasm and meticulous care which is exceedingly stimulating. One is interested to note in a number of places the mention of decline in morbidity and mortality after the proper segregation of

these cranio-cerebral injuries to the neuro-surgical service, an essential requirement in every large city. An interesting feature is the relegation of all case-histories properly referenced in the text to a separate chapter at the end of the book, where one hundred and six pages are devoted to case histories illustrating almost every variety of head injury. Detailed criticisms of the book can be shortly summarized as follows: The photographs are satisfactory but the diagrams are very small and therefore tedious to follow. The print and format is good—the usual standard of Oxford Medical Publications. An unfortunate Americanism is permitted in that numerals are used in the text instead of the usual spelling. It is irritating to read "such a reflex may be activated in 4 ways of which pain is 1."! Oddly enough, the spelling is in the main English in type. These minor points are, however, minute blemishes in a really trustworthy and informative book.

A Handbook of Midwifery. By Sir COMYNS BERKELEY, M.C., M.D., F.R.C.P., F.R.C.S., F.R.C.O.G. Tenth Edition. Pp. x., 633. Illustrated. London: Cassel & Co. Ltd. 1938. Price 8s.—This book is well known and deservedly popular from its previous editions, particularly amongst obstetric dressers, pupil-midwives, and midwives, for whom it is intended. In the tenth edition the subject matter has been brought up to date and in large measure rewritten, whilst everything superfluous has been eliminated. The descriptions of various obstetrical emergencies and manipulations are excellent, whilst the clear statements of treatment by the midwife and treatment by the doctor, given under separate headings, are extremely valuable. The handy size of the book together with the clarity of the type should greatly add to its popularity. The illustrations are uniformly good and the whole format of the book most pleasing. Its index is thoroughly adequate, and the section at the end of the book on "a few points of law" shows the care that has been exercised to make it complete. It would be very hard to improve this as a practical handbook for reference and study.

Dysmenorrhœa. By A. A. Davis, M.D., Ch.M. Pp. xii., 254. Illustrated. London: Oxford University Press (Humphrey Milford). 1938. Price 12s. 6d.—The extensive employment of girls and women in industry makes dysmenorrhœa, though a minor disorder, of considerable economic importance to the nation, as well as to the individual, and the appearance of this monograph by an

author who has done a considerable amount of research work into its ætiology and treatment is very welcome. Any advance in our knowledge of the causation and treatment of dysmenorrhœa must be of advantage to the medical profession, to the employer, and to the patient. The opening chapter of the book gives a short historical survey of the contributions made through the centuries to the medical knowledge of this disorder, and it is interesting to read that Hippocrates described, and used, dilatation of the cervix for the relief of menstrual pain, and that Soranus in 200 B.C. recommended rest in bed, hot drinks and baths, with exercises and massage in the intermenstrual period. The section of the book which deals with the association of dysmenorrhœa and hormonal disorders is concise, and the subject matter in line with modern advances in endocrinology. Several of the older theories which have been advanced to explain spasmodic dysmenorrhœa, *e.g.* hypoplasia of the uterus, and acute flexion of the uterus, are rejected by the author. Chapter six, which occupies nearly one-third of the book, is devoted to the neurogenic theory of spasmodic dysmenorrhœa ; it records the author's own investigations into the pathological changes in the autonomic nervous system associated with this type of dysmenorrhœa, as well as those of other workers in this field. This chapter is particularly interesting and is well illustrated. In the chapters dealing with treatment nothing very new is suggested, but the author is convinced of the value of presacral sympathectomy for the relief of pain in severe cases of spasmodic dysmenorrhœa. The book is furnished with a very complete bibliography, and can be recommended to practitioners wishing to have an up-to-date book on the subject.

The Evolution of Obstetric Analgesia. By A. M. CLAYE, M.D., F.R.C.S., F.R.C.O.G. Pp. x., 103. Illustrated. London : Oxford University Press (Humphrey Milford). 1939. Price 6s. —As an historical survey this book will be greatly welcomed. It is easily read and one passes eagerly from page to page and chapter to chapter. It is particularly interesting to read verbatim reports of Simpson's writings and lectures, and also of one humorously-written report of experiments with the newly-discovered chloroform. This book, however, is much more than a history of analgesics, for it describes in masterly fashion the advantages and disadvantages of the various analgesics, such as scopolamine, nitrous oxide, the barbiturates, etc., used since Simpson first tried ether in January, 1847, for a difficult obstetric case. Simpson's conclusions at

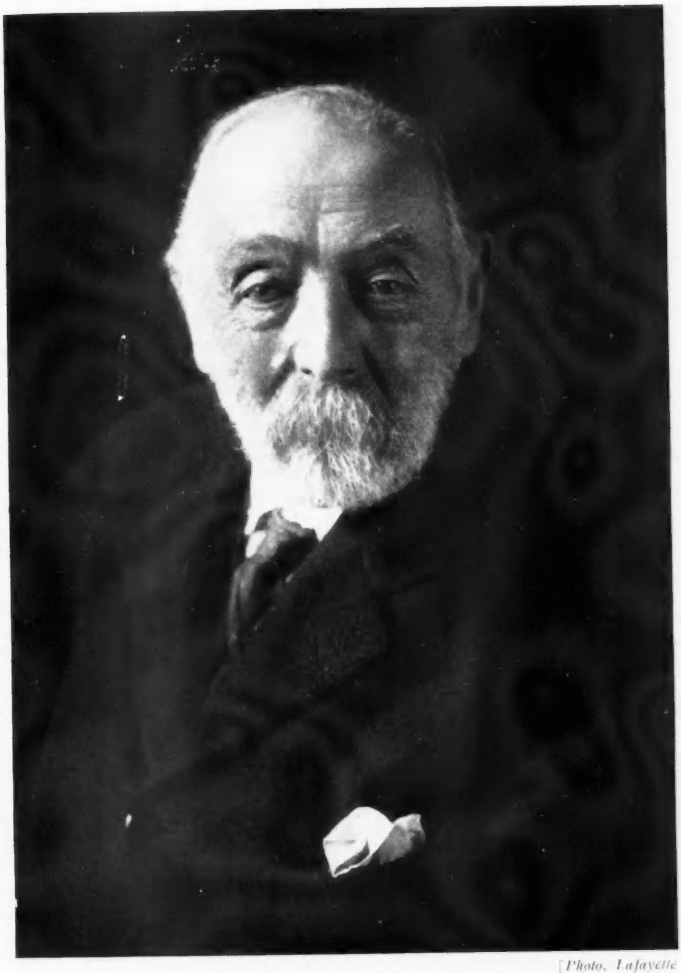
that time could not be improved on even to-day: "It is obvious . . . he had in mind all the criteria for excellence which are still used." The author gives much clinical information, illustrated by tables largely from his own experience. The book is well indexed and references are appended to each chapter.

Obituary

JOHN EDWARD SHAW, M.B., C.M.

THE death of Dr. Shaw on 9th March has taken from us not only the doyen of the Royal Infirmary Staff and a man of the widest culture and interests, but a picturesque personality, long well-known and well-loved. He was born in Bath in 1848 and went to school there: although as a boy he was considered delicate, yet when he entered the Bristol Medical School in 1866 he used to get up every morning at six in order to get from Bath to his classes in Bristol punctually. In 1869 he went to Edinburgh to complete his course, and qualified there in 1872. He was House Physician at the Edinburgh Royal Infirmary, a Fellow of the Edinburgh Botanical Society and President of the Royal Medical Society of Edinburgh. In 1875 he returned to Clifton and two years later was elected Physician to the Bristol Royal Infirmary, a post that he held for thirty years: in 1907 he was appointed Consultant Physician. He was adviser in Lunacy to the Bristol Magistrates from 1879 to 1911, and again from 1917 to 1921: and Professor of Medicine and Lecturer in Practical Medicine and Materia Medica at the University College from 1895 to 1905. He was also Physician to the Bristol Blind Asylum. He was President of our Society in 1897; and in 1894 Vice-President of the Section for Diseases of Children at the Annual Meeting of the British Medical Association.

Dr. Shaw always took an intense personal interest in his patients, and so loved his work that he could not resolve to retire from practice: he was in fact seeing patients right up to the very end of his long life. Reference to our index will show how many and varied were his contributions to our pages. As a teacher he was greatly valued. A former student of his writes: "I think the outstanding characteristics which I recall were his courtesy and politeness. There was a definite drawback in clerking for Shaw, in that he always treated you as if you knew as much about a case or subject as he did and therefore he would not insult your intelligence by



[Photo. Lafayette

JOHN EDWARD SHAW, M.B., C.M.

UNIV. OF MICH.

instructing you. He was an extraordinarily good mimic, especially of various functional nervous disorders, and his lectures on this topic were the most interesting and impressive that I recall during my time as a student; because Shaw's antics, as he demonstrated the various spasms, gaits, fits, etc., brought the subject home to his audience in a very practical way."

Apart from his work, Shaw's interests were of the widest. He was one of the original members of the Bristol and Gloucestershire Archæological Society. He took a keen interest in the theatre, and was President of the Medical Dramatic Club in 1901–02. All through his life he was an enthusiastic gardener, and for many years habitually wore an orchid of his own growing. For years he was a breeder of dachshunds, a hobby that earned him his nickname of "Doggy" Shaw. He also bred and showed fancy poultry. He was a great amateur of horseflesh, and regularly drove a carriage with a striking pair of black horses; he bred polo ponies, until the restrictions imposed by the Great War terminated that activity. When to this catholicity of interests we add a profound knowledge of his professional work, and a kindness of heart universally acknowledged, it is easy to understand how great was the influence Shaw exercised for so many years in the life of our school and city.

CONRAD FITZGERALD, M.R.C.S., L.S.A.

THE death at the age of 92 in his home at Fortune Bay, Newfoundland, on 2nd February, marks the passing of one who was for many years the senior alumnus of the Bristol Medical School, which he entered in the same year as Dr. Shaw, 1866. He was born at Marlborough, where his father was in practice. At the age of sixteen he was apprenticed to Dr. Lawrence of Bath. After working with him for three years he entered the Bristol Medical School, and was a student at the Royal Infirmary, a prizewinner and the recipient of the Committee's Gold Medal. His biography (published by Messrs. J. W. Arrowsmith Ltd. in 1935, with the title of *The Albatross* from the name of his yacht) gives us many reminiscences of medical apprenticeship and the hospital life of the sixties. He qualified in 1870 and almost immediately began his three years as Ship's Surgeon, during which time he made many voyages to Australia and South America, both in sailing- and in steam-ships. In 1873 he accepted an appointment

in Newfoundland, and settled at Harbour Breton in Fortune Bay. He had originally intended to work there for a limited period only, but became so enamoured of the life that he continued there until his death. Here he visited his patients in all weathers in his yacht, the *Albatross* (replaced by a second *Albatross* in 1916), his handling of which became famous throughout Newfoundland. For over sixty years he conducted a practice of the most varied and unexpected sort in an area some forty miles by fifty: when travelling by sea did not serve, it was often a question of many miles in snow-shoes. Burning, drowning, frost-bite, wolf-bite, fractures, epidemics of diphtheria (very dreadful in the pre-antiserum days) all found him ready and well-equipped; anæsthetics were for long regarded as unnecessary—and in any case were often unobtainable. Fitzgerald was a keen sportsman and regularly recorded his bags of trout, partridge, deer and silver fox. He continued in practice to the end of his life, in the home that was so much part of himself, and died as he had lived, far-famed and greatly loved.

The Medical Library of the University of Bristol

WITH WHICH IS INCORPORATED

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in December, 1938.

	March, 1939.
Association of American Physicians (1) ..	1 volume.
Professor R. B. Brocklehurst (2)	1 volume.
Brompton Hospital (3)	1 volume.
University of Geneva (4)	2 volumes.
Professor E. W. Hey Groves (5)	12 volumes.
Colonel F. P. Mackie (6)	33 volumes.
Dr. Paul Niehans (7)	1 volume.
North Devon Athenæum (8)	1 volume.
General Medical Council (9)	2 volumes.

Unbound periodicals have also been received from Professor E. W. Hey Groves, Professor C. Bruce Perry, Dr. G. de M. Rudolf and Dr. J. Odery Symes.

THE ONE HUNDRED AND SIXTY-SIXTH LIST OF BOOKS.

The figures in round brackets refer to the figures after the names of the donors. The books to which no such figures have been attached have either been bought from the Library Fund or received through the *Journal*.

Aiken, C. R.	*A Concise View of all the Most Important Facts Concerning Cow-Pox*	2nd Ed.	(8)	1801
Berkeley, Sir Comyns	*A Handbook of Midwifery*	10th Ed.		1938
Berry, R. J. A.	*A Cerebral Atlas*			1938
Böhler, L.	*Technik der Knockenbruchbehandlung.* 2 Vols.		(5)	1937
Campbell, A., and Poulton, E. P.	*Oxygen and Carbon Dioxide Therapy*	2nd Ed.		1938
Claye, A. M.	*The Evolution of Obstetric Analgesia*			1939
Davis, A. A.	*Dysmenorrhoea*			1938
De Kruif, P.	*Microbe Hunters*			1938
East, T.	*Cardiovascular Disease in General Practice*			1938
Elmer, A. W.	*Iodine Metabolism and Thyroid Function*			1938
Fulton, J. F.	*Physiology of the Nervous System*			1938
Gleichgewicht, A.	*Les hernies de l'estomac à travers l'hiatus œsophagien*		(4)	1937
Granville, A. B.	*The Spas of England and Principal Sea-Bathing Places—Midland Spas*			1841
Ham, I. Burnett	*Handbook of Sanitary Law*	12th Ed.		1938
Hoffheinz, S.	*Die Luft- und Fettenembolie*		(5)	1933
Hoyle, C., and Vaizey, M.	*Chronic Miliary Tuberculosis*			1937
Kappis, M.	*Vorbeugung und Bekämpfung der Operationsgefahren*		(5)	1933
Kayne, G. G.	*The Control of Tuberculosis in England*			1938
Ker, C. B.	*Manual of Fevers.* Revised by F. L. Ker	4th Ed.		1939
Kienbock, R.	*Röntgendiagnostik der Knochen- und Gelenkkrankheiten.* Hefte 4–5		(5)	1934–6
Lanza, A. J.	*Silicosis and Asbestosis*			1938
Lomholt, S.	*Die Moderne Finsenbehandlung*		(5)	1934
Loup, C.	*Contribution à l'étude toxicologique de trente-trois inocybe*		(4)	1938
Moberly, J.	*The Health of the Nation and Deficiency Diseases*			1938
Moon, V. H.	*Shock and Related Capillary Phenomena*			1938
Niehans, P.	*Die endokrinen Drusen des Gehirns*		(7)	1938
Oberholzer, J.	*Röntgendiagnostik der Gelenke mittels Doppelkontrastmethode*		(5)	1938
Pye, W.	*Surgical Handicraft.* Ed. by Hamilton Bailey	11th Ed.		1939
Rogers, Sir Leonard	*The Truth about Vivisection*		(2)	1937
Rogerson, C. H.	*Play Therapy in Childhood*			1939
Rowlette, R. J.	*The Medical Press and Circular*, 1839–1939			1939
Vianna, B.	*Conférences d'orthopédie et de chirurgie*		(5)	1936
Weisz, E.	*Diagnostik mit freiem Auge*	4th Ed.	(5)	1933

Whitla, Sir W. ..	*Dictionary of Treatment*	8th Ed.	1938
Wile, I. S.	*Personality Development and Social Control in Terms of Constitution and Culture*		1939
Wilson, P. D. (ed.) ..	*Experience in the Management of Fractures and Dislocations*	(5)	1938
Zeno, L. O.	*Fractura del cuello del fémur*	(5)	1934

TRANSACTIONS, REPORTS, JOURNALS, ETC.

Brompton Hospital Reports. Vol. VII.	(3)	1938
Dental Register, 1939	(9)	1939
Index Catalogue of the Library of the Surgeon General's Office. 4th Series, Vol. III		1938
Medical Register, 1939	(9)	1939
St. Thomas's Hospital Reports. Vol. III, 2nd Series		1938
Transactions of the Association of American Physicians. Vol. LIII	(1)	1938
Transactions of the Ophthalmological Society of the United Kingdom. Vol. LVIII, Part II		1938
Tropical Diseases Bulletin, Vols. 1–33	(6)	1912–1936

Publications Received

From MESSRS. BAILLIÈRE, TINDALL & COX:

Aids to Forensic Medicine and Toxicology. By W. G. AITCHISON ROBERTSON, M.D., D.Sc., F.R.C.P.E. 11th Edition. Price 3s. 6d. net.

Modern Treatment in General Practice, Yearbook, 1939. Price 12s. 6d.

British Medical Societies. Edited by Sir D'ARCY POWER, K.B.E., F.R.C.S. Price 10s. 6d.

The Surgery of Pain. By RENÉ LERICHE, M.D., LL.D., F.R.C.S. Translated and edited by ARCHIBALD YOUNG, B.Sc., M.B., C.M., F.R.F.P.S.G., F.A.C.S., M.D. Price 21s.

From JOHN BALE MEDICAL PUBLICATIONS LTD.:

Rheumatism. By H. WARREN CROWE, D.M., B.Ch., M.R.C.S., L.R.C.P.

From THE INTERNATIONAL TIN RESEARCH AND DEVELOPMENT COUNCIL:

Publication No. 89, *Tin and its Alloys in Dental Practice.* By F. C. THOMPSON, D.Met., M.Sc., and N. WILD, L.D.S.

From MESSRS. H. K. LEWIS & CO. LTD.:

Infra-Red Irradiation. By WILLIAM BEAUMONT, M.R.C.S., L.R.C.P. 2nd Edition. Price 6s. 6d.

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